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# A <br> TREATISE O N <br> <br> DIAMONDS and PEARLS. 

 <br> <br> DIAMONDS and PEARLS.}

IN WHICH
Their Importance is confidered:

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A N D
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Plain Rules are exhibited for afcertaining the Value of both:
AND THE

True Method of manufacturing DiAmonds.

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\begin{gathered}
\text { By } D A V I D \text { JEFFRIES, } \\
\text { JEWELLER. }
\end{gathered}
$$

The Second Edition, with large Improvements.

$$
L O N D O N:
$$

Printed by C. and J, Acxers, in Sto Yobn's-Street,
For the A U THOR. 175 .
(Price One Guinea Bound.)


TO THE

## K I N G.

$$
S I R,
$$



Beg leave, with the profoundefthumility, to dedicate the following treatife to your Majefty, the patron of truth A 2 and

## DEDICATION.

and juftice, and friend to the common interef of mankind, more particularly to that of your Majefy's fubjects: In which your royal character fhines with the brighteft luftre.

## It contains rational and plain.

 rules for eftimating the value of Diamonds and Pearls under all circumftances, and for manufacturing Diamonds to the greateft perfection : Both which have hitherto been but very imperfectly underftood. From hence, all property of this kind has been expofed to the greateft injury,
## DEDICATION.

injury, by being fubject to a capricious and indeterminate valuation; and the fuperlative beauty of Diamonds has been much debaied.

To countenance a work calculated to promote a general be* nefit, it is humbly apprehended, will not be deemed unworthy the condefcenfion of a Crowned Head, as thefe Jewels conftitute fo large a part of publick wealth: and, as they are, and have been in paft ages, the chief or naments of great and difinguifhed perfonages, in moft parts of the world.

A 3
That

## DEDICATION.

## That the fupreme Difpofer

 of all things may long preferve your Majefy, the guardian of the commerce and properties of thefe your kingdoms, and that you may continue to reign in the hearts of a grateful and loyal people, is the fervent prayer of,May it pleafe your Majefty,

Your Majefty's moft dutifuls

And mof faitbful Subject.

David Jeffries.


## TO THE

## READER.

2nerye $S$ the following Treatife is calculated to inform the world concerning the value of Biamonds and Pearls; the weights made we of relative thereto, are here previoufly explained, as the knowledge of them will be found nece clary to the Publick. They agree the nearef to Troyweight of any other, and are commonly called carat weights; 150 carats make about an ounce of that weight. A. 4 Ca-

## ii To the READER.

Carats are divided into balves, quarters, or grains; eightbs, fixteenths, and thirty-two parts.

The draughts of the fizes of Brilliant and Rofe Diamonds, exbibited in the plates, are tefts to prove the truth and defects of the manufacture of any Diamond, and will be found as necelfary as Scales and weights, in attaining to a right judgment of their value. To make the truth of this affertion appear more evident, it is bere to be obferved; Firt, That either a Brilliant or Rofe Diamond may be wrought in fucb a manner as to contain one-fourth, or even one-third, more weight than it ought to bave, which neceffarily injures the beauty of its form, and likeroife injures its true Spirit and luftre; and,

## To the READER.

if that over-weight be injudiciously valued, together with its due weight, the price will be thereby greatly heightened above its juft value, more especially in large Diamonds. All which overweighted Stones will eafly be difcovered by the fires exhibited in the plates, which exactly Sew the true expanfion of well wrought Diamonds.

Secondly, It is to be observed, that the fazes before referred to will diffcover if any Stones do not carry their true fubftance. An important circumfrance to be regarded, inafmucb as any degree of want thereof, nee $\int$ drily lefens the Spirit and luffre they would otherwise be poffelfed of. In both cafes, directions are given in the treatife, in what manner every Such Stone is
iv To the READER.
to be valued, as well as all other well proportioned ones, according to their water, and Several degrees of perfection, or imperfection, of what fie or weight Soever.

## POSTSCRIPT.

T
HE price of this book, I hope, will not be thought too large, when the following matters are taken into confederation.

Firs, That of its being calculated to Settle the value of Diamonds and Pearls, on a rational and firm bafis; a circumftance of no Small concern, inaf. much as their worth has hitherto been rated by fancy and caprice, which has frequently

## To the READER.

frequently proved very injurious even to traders in them, as well as to otbers who bave bought them for their ufe.

Next, As the fubject concerns only perfons of rank and fortune, and thofe of the trade for whofe ure the book is principally defigned, the fale of it is not like to be very large. To this may be added, that what it contains is the product of many years Audy, and difficult labour of various kinds, attended with an expence much beyond wabat can readily be imagined.

And bere I fall take leave to obferve, that inafmuch as the Tables of the prices of Diamonds and Pearls anfwer the fame purpofes in attaining to the knowledge of the value of the e Jewels, as fcales

## vi To the READER.

fates and weights, they may be conf idered in the fame light ; and that the Diamond fires may be depended on for their truth, they are all engraved by myself, not daring to trust that performance to any one elfe; which is likewife the cafe in respect to Some other things, that I hall not here particularize; all which have ingroffed my thoughts and time to the neglect of my private concerns; by that means I have greatly injured a fortune (not got by trade) that put me above entering on this work with any mean lucrative views; and leafs of all that of publifting for the fake of the profit that might arise therefrom. On the contray, my former circumfances enabled, and my inclinations led me to engage in this attempts in order to Serve the publick,

## To the READER.

lick, and the Jewel trade. And to my great Satisfaction, I find the principles of the book begin already to operate; from whence it may be presumed they will more and more, and that the world will experience their utility. That this was my original motive is a fact well known to forme; and that II formerly intended to have publifhed the matters contained in this treatife, without baving any regard to the profit arifing thereby. The fe circumfrances, doubtless, will have their due weight in accounting for the price of the book.

And now I think it my duty to mention, that whatever knowledge I may have acquired by applying my thoughts and time this way, I ball endeavour faith. fully

## viii To the READER.

fully to employ in any bufiness that I may be honoured with in the Jewelling trade. Ibis I have not Spoke of in my former Edition, nor gould I now, if $I$ were not countenaned in fo doing by dome perfons of rank, and many of my particular friends, both which have of late favoured me that way: And this leads me to hope for an increase thereof, which I flatter my elf will not be found difadvantageous to any that may engage me in their Service. In Saying this I am not apprebenfive of baving fard too much.



IS Royal Highnefs the Prince of $W$ ales. Her Royal Highnefs the Princefs of $W$ ales. His Royal Highnefs the Duke.

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An Explanation of fome technical. Terms made ufe of in this Treatife, in alphabetical order.
$T \mathrm{HE}$ Bezils are the upper fides and corners of the Brilliant, lying between the edge of the table and the girdle.

The Collet is the fmall horizontal plane, or face, at the bottom of the Brilliant.

The Crown is the upper work of the rofe, which all centers in the point at the top, and is bounded by the horizontal ribs.

The Faceits are fmall triangular faces, or planes, both in Brilliants and Rofes. In Brilliants there are two forts, /kew or /kill facets, and far facets. Skill-facets are divided intoupper and under. Upper fkill-facets are wrought on the lower part of the Bezil, and terminate in the girdle; under fkill-facets are wrought on the pavilions, and terminate in the girdle ; ftar-facets are wrought on the upper part of the bezil, and terminate in the table.

## An Explanation, \&c.

The Girdle is the line which encompaffes the Stone, parallel to the horizon; or, which determines the greateft horizontal expanfion of the Stones.

Lozenges are common to Brilliants and Rofes. In Brilliants they are formed by the meeting of the fkill and ftar facets on the bezil: In Rofes, by the mecting of the facets in the horizontal ribs of the crown.

Pavilions are the under fides and comers of the Brilliants, and lie between the girdle and the collet.

The Ribs are the lines, or ridges, which diftinguifh the feveral parts of the work, both of Brilizants, and Rofes.

The Table is the large horizontal plane, or face, at the top of the Brilliant.


C O N-

##  

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INTRO-



## INTRODUCTION.

F20 29 IA M NDS, and Pearls Fove being, of all Jewels, of the Revede greatel importance to this, and moft nations of the world, juftly demand the higheft regard of any ; inafmuch as they conftitute the largeft fhare of wealth of this kind, and are the chief ornaments of great and diftinguifhed perfonages: More efpecially Diamonds, as being the moft beautiful and valuable of all. On which account, as I have been above

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thirty years a confiderable trader in them, and a manufacturer of Diamonds, I have ftudioufly employed great part of my time in fearch of rules to afcertain the value of both under all circumftances, whatever be their weight and magnitude; and likewife, for manufacturing Diamonds to the greateft perfection. And apprehending that I have fully fucceeded; for the promotion of the commerce, and for the benefit of the publick, I have exhibited, in this treatife, means by which the inquifitive-may attain to a right knowledge in thefe matters; and more efpecially concerning thofe from one carat weight, to thofe of one hundred carats.

The plates of the fizes of Diamonds, and the tables of the prizes of both, are extended no farther than to Diamonds and Pearls, of that weight:

They

## [3]

They might be carried on ad infinitum; and the rule of valuing will hold good, tho they fhould weigh as much as Governor Pitt's Diamond, purchafed by the Duke of Orleans for the prefent French King, which weighs ${ }^{1} 36$ carats $\frac{1}{4}$, or as three others memtioned by Monfieur Tavernier, in the fecond part of his voyages, p. 14.8, Englifs tranflation, viz. that of the Great Duke of Tufcany, which weighs ${ }^{1} 39$ carats $\frac{1}{2}$, or that in a merchant's hands, which weights 242 carats $\frac{5}{1}$, or that of the Great Mogul, which weighs 279 carats is.

If what is contained in this treatife be found true, it will confute the notion, that fome Diamonds and Pearls are ineftimable, on account of their extraordinary magnitude; which, to this time, prevails, upon the fuppofition that no methods can be found to

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## [4]

determine their value ; and will likewife greatly contribute to fupport the dignity of the diamond manufacture.

Of the Production of Diamonds, and the Principle of valuing them.

THAT rules may be given for the juft valuing of Diamonds according to their increafe in $\mathcal{f z e}$ and weigbt, is reafonable to fuppofe, from this confideration; that nature has produced in times paft, as well as it does at prefent, Diamonds in the following manner ; viz. a vaft number of fmall ones, and progreflively a lefs number of larger; and that they promifcuoufly inherit the fame properties, and thare alike of perfection, and imperfection. This therefore is a fuf-
ficient

## [5]

ficient foundation for rules to be given for valuing them in proportion to their fize and weight, which will be found hereafter exhibited; and if the ufe and application of them were conformable to the production of nature, the rules thus founded, and prefcribed, would never be interrupted : And therefore, if the humour of the world demands, at any time, more or lefs of any particular fizes and weights than nature provides, the price obtruded thereby muft be reckoned the occafonal, and not the juft price, and complied with as fuch; which happens to be the cafe at prefent, by the extraordinary ufe of fmall Diamonds in the decorations now fafhionable in jewelling. And as the price of thefe fmall Diamonds will always fluctuate by the alterations of fafhions, little regard

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will be had in this treatife to any, under the weight of one carat.

It may be alfo obferved, that the value of rough Diamonds from two, to three carats, and alfo of polifbed Diamonds from one, to one and a half, do not correfpond with the rules hereafter laid down; the price at prefent being lower than what is afferted by the rules; which is acknowledged, and will remain fo, as long as the humour prevails of fupplying the place of Diamonds of that weight, by meanly fetting fmall Stones in a clufter in their room, for the fake of a fhowy and flafhy appearance, at a lefs price than Stones of thefe fizes would admit of; by which means thefe fizes are lefs ufed than formerly, and become cheaper (the production of nature being always the fame) and from hence they are depreciated in their va-

## (7)

lie; fo that the prefent prices of there fizes mut alfo be reckoned the occafonal, and not the puff price.

The rules are, neverthelefs, jut, uniform, and confonant to nature; and therefore are here proper to be offered, in order to affift in coming at the true knowledge of the value of Diamonds of a higher worth, than fuch as are liable to te affected in their price by the alteration of fa/bions in jewelling.

The principle, or rule is, that the proportional increafe, or value of Diamonds, is, as the Square of their weight, whether rough or manafractured. For the explanation whereof, an inftance is frt given in rough Diamonds ; on which account it will be neceffary to lay down a general price, which is fuppofed to be $2 l$. per carat; meaning, the whole fpecies, B $4 \quad$ good

## [8]

good and bad blended together, which are worthy the expence of manufactury. For example, fuppofe the value of a rough Diamond of two carats, at the rate of $2 l$. per carat, fhould be required ; the rule is, firft, to multiply 2 by 2 , which makes 4, the fquare of its weight ; then, multiply the product of 4 by $2 l$, the price of one carat, that makes $8 l$. which is the true value of a rough Diamond of 2 carats.

To make this rule applicable to manufactured Diamonds it will be neceffary to afcertain what wafte, or lo/s of weight, will be fuftained in manufacturing them. And here is may be advanced as a matter of fact, that balf the weight will be loft; confequently, doubling the weight of any manufactured Diamond, renders the rule of the fame ufe to fhew. their

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their value. This lofs is to be underftood to relate to the general manufactury of Brilliant, and Rofe Diamonds in the moft perfect manner. To that end, rules are to be offered for a general practice in both kinds of manufactury ; which, if conformed to, will be found to exhibit Diamonds in fuch a manner, as to be productive of greater perfection, and faving of weight, than any other ftandards of practice.

Of brilliant Diamonds, and the Metbod of manufacturinge them.

BRILLIANTS are firft to be confidered. And the manufactury of a fquare one, is fixed on for the

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the fundamental, and governing rule of practice; nature for the moft part directing thereto, as it produces abundantly more apparent $f x x$ pointed Stones, than Stones of any other form ; and becaufe the fame depth, or fubftance, and the fame manner of proportioning that fubftance, which are effential in rendering a fquare Brilliant compleat, are neceffary in rendering a Brilliant of any other thape compleat; and more fubftance, or any other manner of, proportioning, will be found upon experience prejudicial to the beauty of their form, and the true dignity of their fpirit and luftre ; compared with fuch as are made conformable to the following rules.

The form of a fix pointed rough Diamond is previoufly to be defcribed; as the fhape of it is not much known,

## [II]

It is a figure compoled of two fquare pyramids, joined at their bafes, and which form an out-line of a true fquare. The whole figure is compofed of eight triangular faces, or planes; four above the bafe, and four below it ; all meeting in two points, one at top, the other at bottom; terminating in the poles of the axis, or line pafling through the centre of the Stone from top to bottom. Some Stones are found to anfwer this figure very nearly. To make a compleat fquare Brilliant from fuch a Stone, if it be not exactly true by nature, it mult be made fo by art.

The firft thing therefore to be done, is to reduce that part, reprefenting the bafe of the two pyramids, to an exact fquare, which forms what is called the girclle of the Stone; and then, work by the fquare from the girdle, which

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will produce the two points of the axis; and, if it be truly executed, the length of the axis from point to point, will be equal to the breadth of the fquare from fide to fide. A draught of a fide view of fuch a Stone will be found in the firt plate, $\mathrm{N}^{\mathrm{Q}}$. $\mathbf{I}$.

The next thing to be done, is to produce the Table and Collet. In order to which, divide the block into eighteen parts from top to bottom; and then take away from the upper part $\frac{5}{18}$, and from the lower part $\frac{1}{18}$. This gives the upper part, or table fide, ${ }_{-1}^{4} \mathrm{E}$ above the girdle, which is $\frac{1}{3}$ of the remaining fubtance; and the lower, or collet fide, $\frac{8}{\mathbb{I}^{8}}$ or $\frac{2}{3}$; only 12 of the original 18 parts being left in depth. And thus the table and collet are formed; which will be found to bear this proportion to each other ${ }_{2}$ wiz. the collet will be one fifth of the breadth

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\end{array}\right]
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breadth of the table. In this fate it is a compleat Square table Diamond.

Its different parts are denoted by the letters $a, b, c, d, e_{0} \cdots a$, fhews what is ufually called the table of the Stone, which is an horizontal plane at the top; $b$, the upper fides or $b i f i l s$; $c$, the girdle, which fhews its expanfion; $d$, the under fides or pavilions; e, the collet, which is a fmall horizontal plane at the bottom. The prick'd lines above the table, and thofe below the collet, fhew what has been taken away. A fide view of one will be found in plate I. $\mathrm{N}^{\mathrm{D}} .2$.

Note, This fpecies of manufactury has been exhibited time out of mind; and the Brilliant, which is an improvement upon it, has been introduced within the laft century; as will appear to thofe who thall give themfelves the trouble of an enquiry. But this not being effential to the prefent under-

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taking, (which will be purfued with the utmoft brevity) an hiftorical account of thefe matters is omitted.

This is the foundation of a fquare Brilliant; and, in order to render it a perfect Brilliant, each corner muft be fhortened $\frac{1}{2}$ th part of its diagonal; and then the corner ribs of the upper fides muft be flattened, or run towards the centre of the table $\frac{7}{6}$ lefs than the fides; and the lower part, which terminates in the girdle, muft be $\frac{1}{8}$ of one fide of the girdle ; and each corner rib of the under fides, muft be flattened at the top, to anfwer the above flattening at the girdle; and at the bottom $\frac{x}{4}$ of each fide of the collet. A fide view of one will be found in plate I. $\mathrm{N}^{\mathrm{o}} \cdot 3$.

The parts of the fmall work which compleats it a Brilliant, are called ftar and skill faflets, and are of a triangular

## [15]

gular fhape. Thofe which join to the table are the far faffets, thofe which join to the girdle the skill faffets. Both of thefe partake equally of the depth of the upper fides from the table to the girdle, and meet in the middle of each fide of the table and girdle, as alfo at the corners; and thus they produce regular Lozenges on the four upper fides and corners of the fone, The triangular faffets on the under fides joining to the girdle, muft be half as deep again as the above faffets, to anfwer to the collet part ; that is to fay, in the proportion of three to two. A draught of a Brilliant rendered compleat, will be found in plate I. $\mathrm{N}^{0} .4$.

Under the before - mentioned draughts, are reprefented four compleat Brilliants in an horizontal view, by double draughts, weighing 36 carats

## [16]

rats each. $\mathrm{N}^{\mathrm{e}} \cdot 5$. is a fquare, $\mathrm{N}^{2} \cdot 6$. a round, $\mathrm{N}^{0}$. 7. an oval, $\mathrm{N}^{0}$. 8. a drop. The left-hand draughts regard their upper parts, and thofe on the right their under parts, which are fuppofed to be divided at their girdles. They are thus feparately reprefented, the better to fhow their whole work, and in what manner it fhould lie ; and likewife their fize, or expanfion, and the fize of their tables and collets.

Note, Their perpendicular depths from table to collet, are fhewn by the length of the bars placed under each double draught. The octagon in the middle of the left-hand draught of $\mathrm{N}^{\circ} \cdot 5$. is the table, which is an horiontal plane, or face, at the top, and is denoted by the letter $a$. The triangular faffets adjoining to the table are fiar faffets, and are denoted by the letter $b$. Thofe adjoining

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adjoining to the extream part, or outlines, are skill faflets, and are noted by the letter $c$. Thefe, meeting in the middle of the upper fides, and corners of the ftone, form figures of a lozenge fhape round the upper fides and corners of the Stone, and are denoted by the letter $d$. The out-lines of this, and that of the right-hand draught, are the girdle of the Stone, and are denoted by the letter $e$. The triangular faffets adjoining to the out-lines of the right-hand draughts are the under skill falfets, and are denoted by the letter $f$. The lower fides are denoted by the letter $g$. The octagon in the middle is the collet, which is denoted by the letter $b$; and is an horizontal plane, or face, at the bottom of the Stone. This defcription ferves as an explanation of the other three double draughts. All lineswithin the out-lines of the draughts,
are called ribs in Diamonds. Thefe draughts, with thefe explanations, will always be found of ufe to give a right idea of a Brilliant Diamond. In Plate VI, there is a draught of an inArument ufeful for examining the fize and depth of any Diamond, called a prover.

Of the fizes or expanfion of Brilliants.

IN Plates II, III, IV, V, is exhibited a lift of the draughts of the horizontal reprefentation of 55 Square Brilliants, from one carat weight, to an hundred carats, ranged in a progreffive order, according to their increafe in fize, and weight; which are fo many tefts to prove the truth, or error, of the manufacture of any Brilliant

Diamond.

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Diamond. Here it is to be obferved, that their deptbs are expreffed by the length of the bars placed under each draught; and the fize of their collets, by the octagons under the bars, in order more diftinctly to difern their feveral parts. The numerical figures on the left-hand of each draught, regard their number; thofe on the right-hand, their weigbt.

The reafon why the number of fizes is not more multiplied, is, lef the progreffion of increafe in fize fhould not be difcernable ; and, by that means fhould create too great a difficulty in adjufting the degrees in which any ftone departs from truth. And this the rather, on account of other ftones differing in their fhapes at the table, girdle, and collet, from thofe of Square Brilliants; which increafes, in fome meafure, the difficulty of deter-

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mining any difference to a great nicety ; the ufe of the fizes being to expofe any confiderable, or grofs departure from truth, and to prevent the carrying on the bafe and beavy manufacture, which has of late prevailed in an extravagant degree, to the great difparagement of the Diamond fpecies; and has contributed, likewife, to a great deception, and impofition on the publick. It may with truth be faid, regarding fmall Stones (which means Stones under the weight of a carat) that, in general, they are fo ill made as to be void of their true beauty in all refpects; and, by reafon of their clofenefs, or want of due expanfion, they will not fill up, by one fourth, the fame fpace as well made Stones do in a piece of jewelling work. Confequently, they are fo much lefs in appearance ; and, as they retain one fourth

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fourth more weight, than well made Stones of the fame expanfion; and, as they are wrought for one third, or half the price, the vender of fuch can afford to fell them at leaft 30 per cent. lefs, than he can afford to fell well made Stones.

The truth of thefe matters will evidently appear by future enquiry and obfervation.

Of the Ufe of the brilliant Sizes in difcovering ill swrought ones.

HERE it may be proper to fhow, how far this ill manner of working before-mentioned may debafe Diamonds of larger fizes, and how much it may contribute to the deception both of buyer and feller. To that end will

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be thewn the uie of the fizes in difcovering a well, or an ill made, Brilliant. For example, fuppofe two ftones of fix carats weight each, the one a well made, the other an ill made Stone ; the firt will tally in all circumAtances with $\mathrm{N}^{\mathrm{o}}$. 20. of fix carats weight; and the laft may be loaded with undue fubftance, by which means its expanfion may not exceed one of five, or four carats weight. If any Brilliant be fo circumftanced, it is to be valued only as it agrees with any of the fame expanfion in the lift, allowing for the expence of rectifying ; becaufe, whatever fubftance, or weight, it carries beyond what its fize demands, deftroys, in proportion to fuch excefs, the beauty of its make, and its true fpirit and lufre. And here may be feen, the difference it would make to a purchafer, who may be induced to give
give the price, that a well made Stone of fix carats weight demands, for one whofe expanfion may not exceed that of five, or four carats weight. For example, a Stone of fix carats weight, by the rule before laid down, is worth - - - $L 288^{\circ}$ ○.
One of five carats - 20000
One of four carats - -12800 If the difference be fo great in the inftance given, how much greater muft it be in regard to Stones of larger weights? And as that may be eafily known by the fame method of enquiry, no other inftance need be here given.

Since then, fo great a deception may arife from the ill manufacture of Diamonds, the great ufe of the fizes in difcovering fuch, evidently appears. And, as the attaining a right knowledge of the true make of Diamonds,

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will be found, of all other circumfances, the moft neceffary in arriving at their value; fome remarks are here made, by which the reader is informed in what manner the defects of ill made Brilliant Diamonds will appear. To that end, an inftance is given of a Stone of fix carats weight, which is but of the expanfion of one of five carats. It will partake more, or lefs, of all the following defects. Either it will be deeper than a Stone of five carats ; or, if not deeper, its table and collet will be larger, and that will render it blocky, by the fides being too upright; or, it will be left too thick at the girdle, before the fmall work (which means the far, and skill faffets) is performed; and, if fuch thicknefs be fufficiently reduced ; that is, fo as to be confiftent with fafety in fetting, the skill faffets will be executed in an obtufe, or blunt manner,

## [25]

manner, and that will caufe an undue fwelling in the Stone; or it may, after all, be left too thick at the girdle. A Stone thus made will unavoidably be of an ill form, and be rendered lifelefs, and dull ; which cannot be rectified without the lofs of its fuperabounding weight, which will reduce it to five carats ; and therefore it is to be valued only as one of five carats. And in cafe a Stone, weighing fix carats, fhould tally only in fize with one of four carats, thefe defects will be proportionably increafed, to the fill greater prejudice of the Stone; and therefore it will be purchafing deformity at the price of beauty.

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Of the metbod of manufacturing, and valuing, spread Brilliants.

CYONCLUDING it unnecerfary to add any thing farther on the head of full fubftanced, and overweigbted Brilliants; the next thing that requires notice, is, the method of manufacturing and eftimating $\int$ pread Britliants. As to the method of making them ; to do it in the moft compleat manner, they muft be proportioned, as in the cafe of full fubftanced ones, $\frac{1}{3}$ at the upper, or table fide, and $\frac{2}{3}$ at the under, or collet fide; and whatever be the diameter of their tables, that of their collets muft be $\frac{1}{5}$ thereof. The fmall work is to be performed in the fame manner as is practifed in full fubftanced Stones. This is all that is neceffary

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ceffary to be taken notice of, in regard to their mamufacture. But, previous to the method of valuing them, the following obfervation may be fug-gefted;---that, as fufficient reafons have been given to make it appear, that Brilliants may be injured in their fhape, and true beauty, by a fuperabounding of weight; fo, on the contrary, it will appear, that if they do not carry their true, or full fubftance, they will be injured in both thefe circumftances; by reflecting on the confequence of rendering them very thin or fpread; which has frequently been carried to fo great an excefs, as to deprive them of the benefit of workmanfhip; for the work muft neceffarily be fo flat, as to caufe fuch Stones to be faint, and languid in their luftre, and thereby lefs worthy of efteem in proportion to fuch excefs. Notwithftanding which, it will be found,

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found, that in paft times, inftead of valuing the Weight of fuch wrought Diamonds, lefs on that account, it has been valued the more; merely for the fake of their making a howy appearance. To which may be added, that all fuch Stones are more liable to receive injury by blows, falls, or hard preflure, than full fubftanced ones.

Here it is neceffary to explain what is meant by excefs, becaufe it muft be allowed, that fome Stones are fo formed by nature, as not to be capable of being manufactured by art into any other than fpread Brilliants, without too great a wafte of the Diamond fpecies. Therefore, it may be laid down as a fit rule, to include under that denomination (viz. of excefs) all fpread Brilliants expanded beyond the fize of full fubftanced ones of double their weight ; and fuch

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are to be valued only as they may be fuppofed to weigh, if reduced to this ftandard.

It remains to fhow, in what manner fpread Stones are to be valued; which is as full fubftanced ones are of the fame weight, fimilar in all other circumftances. And they are to be fo valued, on account of their expanfion to the degree above-mentioned; for it muft be admitted, that the fpacioufnefs of their appearance to that degree, counter balances the deficiency of luftre, owing to their want of fubftance. And this is all that can be offered in juftification of fo valuing them, which carries the appearance of partiality rather in their favour, than disfavour; efpecially in regard to fuch as are of the greateft expanfion within the limits mentioned; confidering, that full fubftanced

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fubftanced Stones have all the advantages that both nature and art can beftow.
Of Rose Diamonds.

HERE it is to be obferved, that nothing can more perpetuate Rose Diamonds in the efteem they have hitherto had in the world, than maintaining the truth of their manufacture. Nor was it ever more fit to be recommended than at prefent, on account of the corrupt tafe that has of late prevailed, in converting Rofe Diamonds into Brilliants, under pretence of rendering them, by that means, a more beautiful, and excellent Jewel. This has frequently been done, to the great prejudice of their value, by leffening

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fening the weight, and expanfion they bore in their preceding ftate; and they have frequently been more injudicioufly manufactured in the new fpecies, than they were in the old. This will appear to have been often the cafe, by the upper part of fuch ftones not carrying a true proportion of the fubftance of the Stone: Which of courfe renders the upper part flat, and the table of an immoderate extent; fo that the fide work, or bezil, appears but as a narrow border. This method of working has been introduced for the fake of preferving the expanfion, and weight of fuch Stones, which unavoidably would be more reduced, if they were allowed their true proportion of top. Which reduction both of their weight and expanfion will appear ever neceffary to be done, to render fuch Stones compleat

## [ 32 ]

compleat fpread Brilliants; for fuch only are they capable of being manufactured into.

Of the impropriety of transforming well wroughi Rose Diamonds, into Brilliants.

FR O M what has been obferved, it will appear, that no Rofe Diamonds are proper fubjects of this metamorphofis, but fuch only as are over weigbted; and of fuch, thofe are the moft proper fubjects of the metamorphofis which have the bafe, or girdle, too thick. The over weight will be difcovered by the fizes hereafter mentioned. To convert any Rofe Diamond, not fo circumfanced, to a Brilliant, will be hown to be a practice

## [33]

not founded in reafon, and which carries in it the appearance of an attempt to depreciate this antient and fpacious manufacture of Diamonds, in order to exalt a new one beyond its real and true merit.

For it will be found, that a compleat Rofe Diamond will be more expanded than a compleat Brilliant of the fame weight, and proportionably fo in regard to fpread Stones; therefore, as it has been fhewn, that an increafe of expanfion is fubftituted in the room of depth, or fubitance, in Brilliants, the fame is to be admitted in regard to Rofe Diamonds, provided their expanfion does not exceed the limits prefcribed in the cafe of fpread Brilliants.

And if it be admitted, as fome have afferted, that there is a fuperior excel lency in Brilliants; what muft be the confequence, but that Rofe Diamonds

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muft fink in their value, to the great prejudice of the moft noble and antient Families, who are greatly poffeffed of them, as being a more antient Jewel than Brilliants? But, on the contrary, it will appear that Rofe Diamonds, when truly manufactured, are not inferior to Brilliants, all circumftances confidered.

Of the Form of a Rose Diamond.
COME obfervations are now to be made concerning their form. Their being called Rofe Diamonds, probably took its rife from their fhape, in fome meafure refembling that of a rofebud before it expands its leaves. They appear in a kind of femi-globular form, only terminating in a point at

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the top. Which form, and likewife the work, or facets thereof, covering the whole face of the Stone, being more equal, exhibit a more even difplay of beauty, than a Brilliant, whofe luftre is derived from the angles, or facets, of the fides only. And as their angles are larger than thofe of a Brilliant, they throw forth more copious rays, the luftre of which appears to be equivalent to the fparkling vigour of the fmaller, and more numercus angles of a Brilliant.

The fitnefs of afferting the dignity of the Rofe Diamond manufacture. having been fhewn, the manner in which it is to be performed, is next to be pointed out. But firt, it is neceffary to lay down what is requifite to conftitute a compleat Rofe Diamond. A round, or circular Stone is found the fitteft for that purpofe;

D 2 becaufe

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becaufe its form is the moft beautiful, and productive of more vigour than any other hhaped Stone; which arifes from its admitting of more equal, and better connected faffets, than other fhaped Stones will allow of. And for this farther reafon, that the fame fubftance, and manner of proportioning, which renders them moft compleat, will render Stones of any other Jbape as beautiful as their forms will admit. The right fubftance, proportions, and maufacture of a circular Rofe Diamond are as follow.

Of the Manufacture of a Rose DIAMOND.

HE depth of the Stone from the bafe to the point, muft be half the breadth of the diameter of the bafe

## [37]

bafe of the Stone; and the diameter of the crown mult be $\frac{3}{5}$ of the diameter of the bafe; and the perpendicular from the bafe to the crown mult be $\frac{3}{5}$ of the depth of the Stone; and then, the lozenges, which appear in all circular Rofe Diamonds, will be equally divided by the ribs that form the crown. The upper angles, or facets, will terminate in the extream point of the Stone, and the lower in the bafe or girdle.

In the 6th plate, there are four draughts of Rofe Diamonds manufactured by the before-mentioned rules. The firlt is a fide view of a circular thape. The fecond, an borizontal view of the fame. The third, an oval. The fourth, a drop. Their feveral parts are explained by the firft and fecond draughts. As to the firt, $a$, is the point ; b, the crown; $c$, the girdle. The upper triangles, or faffets,

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how half the work of the crown; the under triangles, half the fide. As to the fecond draught, the common interfection of the fix crofs lines meeting in the centre of the draught, is the point ; the lines that form the hexagoo, and the triangles within it, compole the crown; the triangles without the hexagon compofe the fides; the out-lines show the girdle. All lines in the draughts are called ribs in Biamons, except what express the girdies. There draughts are reprefentatons of Rofe Diamonds of 36 carats weight each, and may be of perpetual ufe to give a right idea of their proper figures, and workmanfhip.

## [39]

Of the Sizes of Rose Diamonds, and their Ufe in difcovering ill wrougbt ones.

The following Plates VII, VIII, IX, X, is exhibited a lift of 55 draughts of circular Rofe Diamonds from one carat weight, to an hundred carats, which are fo many tefts to prove the truth, or defects, of any manufactured Stone of that kind. Their ufe, as in the cafe of Brilliants, will be fhown in proving a Rofe Diamond to be either truly made, or not. For example, fuppofe one of five carats weight; if it be truly made, it will be as expanded at the bafe, or girdle, as $\mathrm{N}^{\circ}$. I 8. of five carats, and the fize of the crown will alfo agree therewith; its depth will be likewife half D 4 its

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its diameter, or breadth. But if it be bafely made, and left loaded with undue weight, its expanfion at the bafe may not exceed one of above three, or four carats weight. Such a Stone, according to the degree in which it falls fhort of its juft fize, will partake of fome, or all the following defects. Either its depth, from the bafe to the point, will exceed the rule; or, tho' it fhould not be too deep, its fides below the crown may be too upright, which will be difcovered by the crown's exceeding its proper extent, and that will confequently caufe a flatnefs from the crown to the point; or the crown may be fituated too bigh; if fo, the fize of the crown may not exceed its juft extent, but then it will occafion an increafed flatnefs of the crown, and produce an extravagant depth below it; or the girdle may be left too thick. If

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any Rofe Diamond is made after this manner, it will, according to the degree in which it is thus defective, be injured in its fhape, fpirit, and luftre; and therefore is not to be valued by its weight, but only as it agrees in fize with any in the lift ; for the fame reafons as are given in the like cafe of Brilliants.

Of the Method of manufacturing, and valuing, SPREAD ROSE DIAMONDS.

THE next thing to be regarded, is the manner of making, and valuing, pread Rofe Diamonds. As to $^{\text {pren }}$ the manner of making them; what is neceffary to be obferved, is, that their crowns muft be of fuch an extent, and placed

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placed in fuch a fituation, as to prevent any difproportionate flatnefs in the crown, and unequal divifion of the lozenges: And, that they be made as thin at the girdle as is confiftent with fafety in fetting them. This is all that is neceffary to be obferved on that head. As to valuing them ; the fame method is to be obferved, as in the cafe of fpread Brilliants in all refpects.

Note, This article of making/pread Rofe Diamonds, is as neceffary to the fame ends and purpofes, as the manufacture of $\int$ pread Brilliants; inafmuch as they occupy thinner matter than Brilliants can.

From what has been faid of Rofe Diamonds, it feems evident, taking in all circumftances, that they deferve as much efteem and regard as Brilliants, and are intitled, weight for weight, to an equal value: Some perfons

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fons with us, and thofe of great reputation for knowledge in Diamonds, prefer the former to the latter ; but, although this be the opinion of particular perfons, it feems no better grounded than that of others, in giving Brilliants the preference; for the fame confequence mult follow from thence to the poffeflors of Brilliants, as has been mentioned concerning the poffeffors of Rofe Diamonds; which was, that if Brilliant Diamonds were preferred to Rofe Diamonds, thefe latter mult fink in their value; fo, on the contrary, if Rofe Diamonds are preferred, Brilliants muft fink in their value; and if they are equally efteemed and valued, as appears they ought to be, it will conduce to the faving of weight, that a bias to either mode of working will unavoidably occafion.

The

## (44)

The next thing that falls under confideration, is the methods of valuing Diamonds.

The firft Method of valuing wrought DIamonds in conjunction with ROUGHDIAMONDS, out of which they are fuppofed to be wrought.

AN example is here given to fhow in what manner the value of a manufactured, or wrought Diamond, of one carat, is to be found, upon the principle advanced, fuppofing rough Diamonds to be valued at two pounds per carat.

The weight of fuch a ftone muft be doubled. (on account of half being fuppofed to be loft in working it) which

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which is confidered as its original weight, making two carats; then multiply that weight into itfelf, which fquares it, and makes 4 ; laftly, multiply the 4 by 2 , that produces eight pounds, which is the value of a Stone of one carat wrought or polifhed, and is equal to the value of the rough Diamond of two carats, out of which it is fuppofed to be made. This fingle inftance is here given to fhow the value of rough Diamonds in the price of wrought ones; and as a farther explanation of the rule of valuing them, and previous to the offering any other, it is to be obferved, that although two pounds is laid down as the general price of rough Diamonds, it is neverthelefs to be underfood, that rough Diamonds differ in their value according to their different degrees of perfection or imperfection, and according

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according to the lofs of weight they may be fuppofed to fuftain in being truly wrought ; as it is well known, that fome will lofe abundantly more than others, arifing from their ill forms and other defects that may attend them, which defects are fo numerous and difficult to be expreffed, that what may be faid of them would probably not be underftood but by the moft experienced traders and manufacturers of them. This confideration and that of its being but of little concern to the publick, prevents my faying any thing more relating thereto.

In farther explaining the principle of valuing wrought Diamonds, three other inftances, befides that already given, will be offered, to fhew the operation of the principle in coming at the value of wrought Diamonds, which it is judged will be fufficient in all other

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cafes in this way of proceeding. After that will be offered three more of the fame weight, in a different manner of proceeding, but to the fame end.

Here it may be proper to hint, that all the inftances that will be given, are founded upon the price of rough Diamonds in general being put at two pounds per carat, viz. good and bad blended together, as has been before noticed; fo that two pounds is the price of the middle fort only : And it is alfo to be remembered, that in manufacturing, half the weight is fuppofed to be wafted. And as miftakes may be made in calculating the value of particular Diamonds, in the manners hereafter prefcribed, it is here noted, that the prices of Diamonds, from one of one carat to one of an hundred carats, of this degree of goodnefs, are contained in Plates XI, XII, XIII, XIV,

## [48]

XIV, XV, XVI ; which will prove the truth or falfity of any calculation: And it is alfo to be obferved, that the expence of manufacture, or workmanfhip, is excluded in all the inftances that will be given on this occafion, the reafons of which will hereafter appear.

Now follow the three other inftances propofed, to explain this firft method of finding the value of any wrought Diamonds.

> The firfinstance.

To find the value of one of five carats weight, the weight muft be doubled, on account of half being fuppofed loft in working it; that replaces its original weight, which makes ten carats; then multiply 10 by 10 , that fquares

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[49]
$$

squares the weight, and makes roo carats; and, laftly, the 100 mut be multiplied by 2 pounds, the price of one carat; that produces 200 pounds, and is the value of a wrought Stone of five carats, and the price of the Diamond when rough.

EXAMPLE.


## Second Instance.

To find the value of one of five carats $\frac{1}{8}$, the weight mut be doubled, that makes $10 \frac{1}{4} ;$ next multiply that
E weight

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[50]
$$

weight by 4 , to bring it into fourths, or grains, which makes 4 I ; then multiply 4 I by 4 I , that makes I 68 r , the fquare of the weight in fixteenths; therefore divide the 168 I by 16 , that brings it again into carats, and makes 105 carats $\frac{1}{16}$; which multiplied by 2 pounds produces 210 l .2 s .6 d . and is the value of the Stone, rough or wrought.

## EXAMPLE。



$$
\begin{gathered}
{[5 \mathrm{I}]} \\
\text { Third INSTANCE. }
\end{gathered}
$$

To find the value of one of five carats $\frac{7}{4}$; the weight doubled is 10 carats $\frac{1}{2}$; reduce that weight into grains, by muletiplying it by 4 , that makes 42 ; then multiplying 42 by 42 , that makes 1764, the fquare of the weight in fixteenths; which divide by 16 , that brings them again into carats, and makes IIO carats and $\frac{4}{16}$; which multiply by $2 l$. that produces 220 . Ios. and is the value of the ftone, rough or wrought.

$$
\begin{gathered}
\text { EXAMPLE. } \\
10 \frac{1}{2} \\
\frac{4}{42} \\
\frac{42}{84} \\
\frac{168}{167^{2}(110} \text { Carats } \\
\text { f. } 22010 \\
E 2
\end{gathered}
$$

The

## [ 52 ]

The second Method of valuing wrought Diamonds, in Conjunction with the ROUGH Diamonds, out of which they are fuppofed to be wrought.

## Firft Instance.

10 find the value of a Deamod of five carats weight, as in the foregoing cafes, fo in this, the weight mut be doubled ; that makes 10 carats. As a rough Diamond of one carat is valued at two pounds, every carat in this Stone accumulates ten times that value ; and fo every carat in this Atone is to be valued at twenty pounds; therefore multiply 10 carats by 20 pounds, that will

## [53]

will produce 200 pounds, and is the value of the Stone, rough or wrought.

EXAMPLE.

Multiplied by $\quad$| Io Carats |
| :--- |
| 20. |

Second Instance.

To find the value of one of five carats $\frac{1}{8}$; the weight doubled makes 10 carats $\frac{1}{4}$; next reckon that weight in the foregoing manner, that makes every carat in this Stone worth twenty pounds, ten hillings: So firf multiply 10 carats by 20 pounds, that makes 200 pounds; then multiply 10 carats by 10 fhillings, that makes $E_{3} 100$

## [54]

100 fhillings, or 5 pounds; next add the value of a fourth of a carat at the rate of $20 \%$. 10s. that makes 5l. 2s. 6 d. laftly, caft up thefe three fums, the total will be 2 rol . 2s. $6 d$. and is the value of the ftone, rough or wrought.

> E X A MPLE.

| Multiplied by | 10 20 | Carats <br> Pounds |
| :---: | :---: | :---: |
| Makes | 200 | Pounds |
| 10 Cts. muit. by ros. makes | 5 |  |
| The Value of $\frac{1}{4}$ of a Carat $\}$ | 5 |  |
| Makes the Total | 210 |  |

## Third Instance.

To find the value of one of five carats $\frac{1}{4}$; the weight doubled makes

## (55)

ten carats $\frac{7}{2}$; reckon that weight as in the two other cafes, that makes every carat in this Stone worth 21 pounds: So multiply 10 carats by 21 pounds, that makes 2 Iol. then add the value of the half carat at 21 per carat, that makes iol. Ios. laftly, add the two fums together, the total will be $220 \%$. 10 s. and is the value of the Stone, rough or wrought.

$$
E X A M P L E
$$

| Multiplied by |
| :--- |
| Makes <br> The Value of the $\frac{1}{2}$ Carats <br> added, which is |
| 210 <br> adat |

$$
\begin{gathered}
\text { Makes the Total } 220 \quad 10 \\
\text { E } 4
\end{gathered}
$$

## [56]

The inftances that have been given of two methods, for finding the value of wrougbt Diamonds, as they fand connected with the rough (out of which they are fuppofed to be made) it is apprehended, are a fufficient explanation of the principle for valuing rough and wrougbt Diamonds; and prove its being founded on reafon.

Of the Method of valuing: wrought DIAMONDS, exclufive of any $R e$ gatd to rough Diamonds.
$S$ inftances have been given of two different methods of attaining the value of wrought Diamonds, in which cafes the value of rough Diamonds of double their weights,

## [57]

weights have been jointly confidered, they being fuppofed to be made from fuch rough Diamonds; three inftances of manufactured Diamonds, of the fame weights, will be now offered, to fhew in what manner their value may be found, exclufive of any regard to rough Diamonds: And as the laft method appears the fhorteft, and moft eafy to be underftood, that method will be made ufe of on this occafion.

This is to be known by applying the price they bear manufactured, which has been fhewn, viz that as rough Diamonds are valued at two pounds per carat, a wrought Diamond of one carat is worth eight pounds; fo to find the value of a Stone of that degree of goodnefs, whatever number of carats are contained in fuch a Diamond, each is to be valued at eight pounds; and what-

$$
\left[5^{8}\right]
$$

ever fum they make, muft be multiplied by the weight of the Diamond. The inftances are as follow.
Firf Instance.

To find the value of fuch a Diamond of five carats weight, reckon every carat at eight pounds; then multiply 5 carats by 8 pounds, that makes 40 pounds; fo every carat is to be valued at 40 pounds; then multiply 5 by 40 , that produces $200 \%$ and is the value of fuch a Diamond.
EXAMPLE

|  |  |
| :---: | :---: |
| Multiplied by | 40 |
| Makes the Total | 200 |

Seconal

## [59]

## Second Instance.

To find the value of one of five carats $\frac{1}{8}$, at the rate of 8 pounds per carat ; multiply 5 by 8 , that makes 40 ; then add to that the value of $\frac{1}{8}$ of eight pounds, that is one pound; fo the value of every carat in this Stone is 4 I pounds; then multiply 5 by $4 \mathrm{r}_{3}$ that makes 205 pounds; next add the value of $\frac{1}{8}$ of $4 I$ pounds, that makes nl. 2s. Gd. There two fums catt up produce $210 l .25 .6 \mathrm{~d}$. and is the value of the Diamond.

> EX AM PL E.

Multiply by


Third

$$
[60]
$$

## Third Instance.

One of five carats $\frac{1}{4}$, the value of each carat is 42 pounds; multiply 5 by 4.2, that makes 210 Pounds Then add the value of $\frac{1}{4}$ of $\}$ 10 100 which is

Makes the Total

$$
\text { £. } 22010
$$

Of the bighefi and loweft Price of ROUGH and POLISHED DIAMONDE.

THVING explained the diffferent methods of finding the value of rough and wrought Diamons, of the middle fort, the first being rated at two pounds per carat, the

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[61]
$$

the fecond at eight pounds; as rough and polifhed Diamonds may be of a higher and lower value, it remains to fhew what may be the higheft and lowent of each.

Firft, I fhall fpeak of roughDiamonds, and fhall fuppofe three prices; for inflance, one pound, two pounds, three pounds; the middle being two pounds, there appears an advance of one pound above the middle price, and a fall of one pound below ; which is a deviation of fifty per cent. each way, and makes the worf fort be but $\frac{1}{3}$ the value of the fineft.

That the two extreme prices naturally proceed from that of the middle price, I thall endeavour to prove; and in order thereto, I Thall firit flew, that no rough Diamond, which is not worth one pound per carat, ought to be manufactured ; becaufe all that are

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[62]
$$

of lefs value muft be very defective, carrying many, or all of the following blemifhes, fouls, or ftains, fpecks, flaws, being veiny, cragged, ill-formed, and of an ill-colour ; which, confequently, muft obftruct and defeat the purpofes of manufacture ; for with all that art can do, they will be void of luftre, which will fink them below the rank of a jewel.

Next, it is to be obferved, that all under that value will fell for as much, to be ufed in cutting or forming the better fort, as any one can afford to give for them, with the view of manufacturing them; for the expence of workmanhhip muft be the fame as for better Stones, if well done; and if not well done, it will add to the other defects; and the lofs of weight muft be greater than what attends better Stones, by its being frequently neceffary to difcharge or leffien the defects before

## [63]

before mentioned: Indeed, when a Stone of a very large fize falls in the way, it may be thought worth the expence of working, as its fize may recommend it, thefe being rarely to be met with, but not as ornamental to any thing; and fuch may be valued below four pounds per carat, as the buyer and feller may agree on.

As it cannot but appear, that no rough Diamond ought to be wrought that is not worth one pound per carat, this muft be allowed the loweft price of rough Diamonds, worthy of manufacture, which, as has been obferved, is half the value of the middle price ; fo allowing as much advance above it, makes the price of the fineft rough Diamonds warth three pounds per carat.

This being admitted, it fhews, that manufactured Diamonds, of the worft fort, are worth four pounds per carat,

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[64]
$$

and the fineft twelve pounds per carat $\$$ and this, probably, will be thought foope fufficient to employ fpeculation and judgment; and if the value of rough Diamonds fhould rife or fall, the middling price muft be always that which the whole was valued at, good and bad blended together; and as many prices as will lie between thofe of the loweft price, and thofe of the middle price, fo many muft be admitted above the middle price, and that will determine the higheft price: Or, in other words, whatever the worft are valued at below thofe of the middle fort, fo much mult the fineft be valued at above the middle fort. And there-fore the value of all Diamonds is to be adjufted within the limits of the extreme prices.

Remares

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\left[6_{5}\right]
$$

Remaris on Brazil Diamondso

FROM the want of this knowledge, and the rule of valuing Diamonds, has arifen the wide difference of jewellers fentiments, concerning their juft and natural value; the ill effects of which difference to individuals I fhall be filent about, that having been too fenfibly felt to need any remarks: But proceed to fhew what an effect it has had in times paft on this important property in general.

In the year 1733, rough Diamonds were not worth twenty fhillings per carat; in the year 1735, not worth thirty fhillings; in the year 174.2, not worth more than thirty fhillings per carat ; all which may clearly be made appear from publick fales in the before-

## [ 66 ]

mentioned years. Catalogues of them I have preferved, on which I have made particular remarks, and fhall be ready to fhew them on any proper occafion. I have been the more careful to preferve them, believing there never will be the like exhibited again ; and the farther caufe of publifhing thefe facts, is to fhew, that if the traders had better known how to value Diamonds at that time, and had been better informed of the real caufe of fo great a plenty as then appeared, they would not have difcovered fo great a confternation as then poffeffed them; which occafioned many, even of the moft capital traders in London, to believe, that Diamonds were likely to become as plenty as tranfparent pebbles; and they were fo far influenced by this opinion, that moft of them refufed to buy Diamonds on any terms.

## [67]

The adventurers were chiefly perfons of low circumftances, on which account the Lisbon merchants dreaded any returns made them in Diamonds, or any fent them for fale'; being forced to deal with fuch perfons upon credit, and at any price that thefe purchafers were pleafed to give for them.

One of the molt confiderable Portugal merchants, with whom I dealt, told me, in the month of Fan. 1733-4, at which time I bought a parcel, to the amount of feven hundred and fifty pounds, that he had been forced (for want of more reputable buyers) to fell and give credit for many hundreds of pounds, to fuch as he would not have trufted with five pounds cafh; and that he found other merchants were is the like cafe: On which acount there were many large parcels returned to Lisbon, they not being able to find

$$
\mathrm{F}_{2} \text { buyers }
$$

$$
\text { [ } 68 \text { ] }
$$

buyers enough, even of this fort, to take off their goods.

I fhall here mention fome other matters, that arofe in converfation at this time. This gentleman obferving me to be more exact then others in weighing the large Stones of the parcel I bought of him, and fome of other parcels, asked me the reafon of it ; upon which I told him, that no man who did not know how to value Diamonds in proportion to their weight (whatever knowledge elfe he might have of rough Diamonds) could be a proper judge of the value of any Stone. Upon which he was pleafed to fay, if I had that fecret, he appreliended I might get what money I pleafed. I told him, it could be of no fervice to me till it became publick, and the world made fenfible of the truth of the principle. Upon this

## (69)

he faid, he thought it might be of great ufe to make it publick, and asked, if I did not intend to communicate it to the world. I told him, it was my intention, when circumftances rendered it more proper; obferving it would be by no means proper then, as the publick, and likewife the traders in them, were fo apprehenfive of the Brazil mines producing an inexhauftible fore ; judging from thence, the world would fcarcely think Diamonds worth any confideration, efpecially as jewellers fo undervalued them.

As this has been, and ftill is, in a lefs degree, the flate of the cafe in regard to Diamonds, it may be proper to inquire, whether it be fact, that thefe mines have produced any Diamonds; or whether the Diamonds that have been fent from thence, be not fuch as they procured by trade.

## [ 70 ]

Having many years paft been very folicitous to know the truth of this matter, I have fpared no pains to come at as good a knowledge thereof as I could procure ; and what information I have met with, I hall difclofe.

In the year 1734, I had the pleafure of being acquainted with a gentleman that had been, but a few years before that time, governor of Fort St. George. He told me, upon my talking with him about the Brazil mines, that he did not believe a tittle of the report, and gave this as a reafon for his disbelief of it, namely, that when he was at Fort St. George, he was informed, that the Brazil people had long carried on a fecret trade with the India people at Goa for Diamonds, and was affured they had a vaft flock, but not very fine, they generally chufing to buy the more indifferent fort, for the fake

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[7 \mathrm{I}]
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fake of cheapnefs ; and he faid, whatever quantity came from thence, would not alter his opinion, in regard to the value of what he was poffeffed of, nor would he abate of the price they were valued to him at, in India; faying, they only knew how to value Diamonds. In this refolution he perfifted to his death, which happened but a few years fince. Some of thefe Diamonds he fold before his death, at his own price; and he then faid, it was his opinion, that their fending their Diamonds to Lisbon, was not a matter of choice, but neceffity, being forced thereto, in order to raife a large fum of money to difcharge great arrears of indulto, which they then owed the king of Portugal; and the fame has, fince that, been faid by others. And, moreover, it has been faid, that the late king having been F 4 made

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[72]
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made acquainted that they were greatly in debt to their European correfpondents, he infifted upon their fending a fufficient quantity to difcharge thofe debts; and when they came to Lisbon, in order to give immediate fatisfaction to the merchants, it was faid, the king ordered them to be fold in a publick manner, for the fake of expedition; and fome have thought it was done out of refentment to his Brazil fubjects, for their ufing him and the European merchants ill; he knowing they had it in their power long before to have remitted thefe Diamonds.

Another circumftance had like to have efcaped my notice, which is, that it has been alfo reported here by perfons of figure and unqueftionable varacity, who happened to be at Fort St. George when it was reported that the Brazil mines had furnifhed Eu-

## [73]

rope with a great quantity of Diamonds very cheap, that the India people laughed, and faid, it would not alter their price.

From what has been obferved, there feems room to think, that thefe Diamonds are the effect of the king of Portugal's fubjects trade, and not the produce of his Brazil mines; for it cannot be thought any prince would have countenanced fuch a difadvantageous method of difpofing of the produce of his own mines, as was practifed in getting rid of them, notwithftanding any redundancy; on the contrary, that he would have reftrained the fending any quantity, that muft tend to fink their value, which is always carefully avoided by the India people.

And if it were true, that his Brazil mines fo abounded with Diamonds,

## [74]

they muft be come at with a great deal lefs expence than attends the fearch of Diamonds in India; and of courfe he muft become the richeft prince in Europe: For it would be an additional employment for his Brazil fubjects, in confequence of which his commerce muft be greatly increafed; in as much as we fhould always encourage it, rather than that of the India trade, on account of our purchafing Diamonds in India chiefly for bullion. And can it be fuppofed, a wife prince would difregard a gift of Providence fo highly efteemed by the eaftern part of the world? And therefore the methods made ufe of, muft be fuppofed to proceed from the late king's knowing they were the effects of trade; if fo, it cannot but be judged a wife and juft ftep in him, to force them to difcharge their obligations to himfelf, and their

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[75]
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correfpondents, knowing they could procure no advantage to them, by lying in their hands as a dead ftock. Befides, trading in Diamonds has been difallowed by the late king, and to conceal it from his knowledge is fuppofed to be the reafon of their giving out, that the Diamonds they were formerly poffeffed of, were the produce of his Brazil mines; and to make it the more plaufible, they fuffered it to be reported, that they were of a different nature, as well as worfe than India Diamonds.

Upon this occafion I will venture to fay (from critical obfervations, in an extenfive commerce and manufacture of both) that there has not appeared to me a circumftance in thofe called BrazilDiamonds, that have not found in India Diamonds; and it is likewife noticed, that fome years cargoe from the

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[76]
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the Brazilshave been as fine as any year's cargoe from India; and that the fmall Diamonds have fold at as high a price as ever was given for fmall India Diamonds. And it is alfo remarked, that what have of late been brought from Brazil, we hear but little of, more than that their quantity yearly leffens, notwithftanding their price is raifed more than treble of what they bore fome years ago. There are various fentiments among traders concerning the caufe of it ; but being much divided in their opinions, I thall not trouble my readers therewith ; not doubting, but their fending fo few, will appear to arife from their not being poffeffed of more. And from hence may be inferred, that they are interrupted in this commerce, and deprived of the means of procuring them as formerly; which.

## [ 77 ]

means are fuppofed to have been their purchafing them with Brazil gold, wherein the Brazil mines are known to abound in a profure degree ; and in this fenfe it may be faid, the Diamonds that we have had from thence, are the produce of the Brazil mines; and if there be a check, or an interruption thrown in the way of this barter, we cannot expect to have fuch quantities as formerly, although more or lefs may always come from thence; which has been the cafe before the great glut appeared, but they.were not then called Brazil Diamonds, and what was brought from thence was conducted with great fecrecy: And it is likely this trade will be continued, from the circumftance of Diamonds being fo portable a commodity, and what may be conveyed with great fecrecy, however frict his Portuguefe majefly's orders

## [ 78 ]

ders may be in prohibiting thereof. As to the political reafons for prohibiting this traffick, it is not my province to meddle with that.

Amidft what has been faid to fhew the improbability of the Brazil mines having produced the Diamonds that of late years have been placed to their account, the circumftance that has been before mentioned, deferves more than ordinary notice ; therefore I fhall recite it again; which is, that, notwithftanding the India people knew what defpicable prices Brazil Diamonds fold for in Europe, in the before mentioned years, they kept up the price of their Diamonds; which feems to prove they were the fellers of thofe Diamonds to the Brazilians, and ferves to explain what they meant by laughing at the report of the Brazil mines furnifhing

Europe

## [79]

Europe with Diamonds, and their faying it would not alter their price.

This conduct, furely, deferves the higheft applaufe; for had they copied after the Brazilians, this great article of wealth, by this time, would have been reduced almoft to nothing ; the ill effects of which, words cannot fufficiently exprefs: The prevention of this evil the India people muft have the honour of.

To maintain as invariable a price of thefe jewels as is poffible, muft be of the greatef utility to the publick; which they appear to be fenfible of, from their paft conduct ; but there is more to be offered in proof of this.

It is attefted by unqueftionable authority, that when they find a flack demand for Diamonds, they always withdraw them ; the confideration of any quantity they may be poffeffed of,

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[80]
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feems to be no motive with them for abating their price; which is believed to arife from their fuppofing they have no competitors to fubject them thereto; and from what has been obferved, the truth of it can fcarcely be doubted; and their manner of trading with us feems to be a farther proof of it; which is thus:

They firf find out what forts are wanted, and then fhew fuch goods and put their price: If they are fold, they have their demand; for they fuppofe themfelves to be the only judges of their value; and it does not appear that any one has difputed the truth of it. From hence it is, that Diamonds are fent here in bulces, which means parcels of Diamonds neatly tied up in mullins and fealed by the fellers of them; which Diamonds are generally bought here by the invoice, that is, are bought before

## [ 8I ]

before they are opened; it being always fuppofed they contain the value which they were fold for in India; and the buyer here gives the merchant fuch a profit as contents him. The Diamonds peing thus bought, the buyer opens the parcel, feparates them, and then values them feparately as his judgment directs; making to himfelf likewife fuch a profit upon the whole parcel, as he thinks proper. And as this is the cafe, it is referred to the confideration of reflecting minds, whether or no any man can properly judge of the value of Stones of different fizes and properties, without fome rule to direct his judgment. As for the different properties of Diamonds, fpeculation, affifted by the knowledge acquired in manufac-turing Diamonds, is the only guide; but whether any can judge of their G value,

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value, regarding their magnitude, is the thing in queftion. It feems as if our traders thought the India people were mafters of fome rule for that purpofe, by placing fuch confidence in them, as it appears they do by this reprefentation; and it is believed, when the European part of the world are acquainted with the true method of eftimating Diamonds, it will be found, that the India people have generally valued their large Diamonds alike at all times, let the demand for them vary as it may.

If that be the cafe, is not this iffuing out another ftaple commodity, like that of gold and filver? And although its value is not afcertainable to fo great an exactnefs as either of thofe, by an affay ; yet it may appear, they are reducible to as great a nearnefs in fpeculation as either of the other two.

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But however beneficial this may be, the value of Diamonds can never be at all fettled in Europe, whilf we are amufed with the notion of the Brazil mines being productive of Diamonds. How far it is the intereft of thefe parts of the world to be well informed of the truth of this matter, is left to the confideration of the publick.

But fuppofe it fhould be remarked, that although Diamonds in India may at all times be near the fame value, it cannot be the cafe in other parts of the world, arifing from various circumftances : The chief caufe of which variablenefs in the price of Diamonds, or any jewels, in other parts of the world, cannot but be feen to be the difagreement in the fentiments of jewellers concerning the natural value of them. But the exG 2 traordinary

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[84]
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traordinary inftances in the late wars in Germany will be a farther proof of it, inafmuch as it has been told us by publick papers, that not above one third or one fourth of the money which gems have coft, could be procured by way of pledge or fale: Indeed, the avarice of the buyers may have fome fhare in occafioning fo great a lofs. Does this prove the intrinfick worth of jewels, fo frequently talked of? Muft not this be a vaft difcouragement to great perfonages from vefting themfelves with this property ? - -How fit therefore is it to render them as invariable in their price as the nature of things will admit of, fince they poffeffed themfelves thereof, not only for perfonal ornaments, but alfo as articles of folid treafure, to ferve fuch emergencies as have been noticed? And it is known, that there are fome rough Diamonds of

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great price, as well as polifhed, in Eurape, which have been bought upon that principle.

Since it is thus, nothing can be a greater inducement to perfons of high ftation to purchafe Diamonds, than rendering their value more ftaple. And as nothing can accomplifh that fo much as being well acquainted with their true value, the following method will be found the only way of coming at that knowledge.

It appears from the reafon of things, that all large Diamonds are to be valued according to the rule advanced, by the price that one of a carat bears, which is fimilar to the Stone, whofe value you would know; for as you value the weight in a Stone of one carat, fo muft you that of a Stone of the fame properties, let the weight be what it may. And as a farther proof

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\text { G } 3 \quad \text { of }
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## [86]

of its being right, it will be found that jewellers of the greateft experience and knowledge have generally eftimated Diamonds as this rule directs, by dint of found judgment: And as the younger and lefs experienced muft want fome affiftance in this im portant concern, this will put them in the right way, and by means hereof the value of Diamonds will be made univerfally known; as it lies in fo narrow a compafs as that of any one's making himfelf acquainted with the worth of a Diamond of a carat weight; which, it is prefumed, perfons of good judgment cannot be at a lofs to know, let them be good, bad, or indifferent; and that fuch will agree in their fentiments concerning the value of a Stone of a carat weight, be it as it may, to five or ten per cent.

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[87]
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Of the Table of Prices of $\mathrm{D}_{\text {diamonds. }}$
HE next thing to be taken notice of, is a table, which will be found in the 14 th, 12 th, $\mathbf{1} 3$ th, 14 th, 15 th, and 16 th plates. This table confifts of the price of Biamoods from one carat weight to an hundred carats, formed upon the primsiple of valuing them by the fquare of their weight, upon the fuppofition that the governing price of rough Damonds, good and bad blended tonethee, is $2 l$. per carat ; fo that $2 l$. is to be reckoned the mean, or middle price, and will be found of great use to prevent the trouble of calculating the price of every Stone by the rule. If any Stone differs in its value from this mean, or middle price, whether

$$
\text { G } 4 \text { highest: }
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## [ 88 ]

higher or lower, fo much per cent. is to be added, or deducted, as judgment fhall direct. It may be obferved, that the tables do not defcend to fixteenths of a carat ; it is omitted for brevity's fake, which may be fupplied by cafting up any two adjoining prices, and then take the half, that will give the prices of the intermediate weight. For example; a Stone of one carat will be feen to be the firt article in the table, and to come to 81 . To find it out by the rule, the method is to multiply 2 by 2, that makes 4 , which is the fquare of its weight; then multiply 4 by $2 l$. the price of one carat, that makes 8l. Here it is to be remembered, that all the prices which the table contains are fuppofed to be of the middle fort, and alfo that half the weight is fuppofed lof in making, which occafions the firt multiplying by

## [ 89 ]

by 2 ; but, as this method is more la $=$ borious, and intricate, in regard to Stones of odd weights, the table will be found of much convenience.

An inftance is here given as a proof of a Diamond of feven carats $\frac{7}{8}$ in the two different methods of valuing. For example; the firft method is this: The weight of a Stone of feven carats $\frac{7}{8}$ muft be doubled, which makes fifteen carats $\frac{3}{4}$; next, that weight muft be multiplied by 4 to bring it to grains, that makes 63 ; then multiply 63 by 63 , that makes 3969 , the fquare of the weight in fixteenths ; therefore divide the 3969 by 16 , that brings it again to carats, which makes 248 carats and $\frac{1}{16}$; which multiplied by 2 pounds produces 496 l .2 s .6 d . The fecond method is this : Firft, fee what a Diamond of feven carats $\frac{7}{8}$ is worth per carat, which will be found to come to 63 pounds; firft multiply

## [ 90 ]

7 by 63 , that makes 44 I pounds: then add the value of $\frac{7}{8}$ of 63 pounds, which comes to 55 l .2 s .6 d ; thefe two fums added together produce 496l. 2s. 6d. fo both totals are alike, and agree with the price of one of the above weight in the table.

It will be here proper to obferve farther, that no notice is taken of the additional price, which the expence of manufacture would occafion in each Stone. This is omitted on account of the different prices, their different fizes and weights demand ; and likewife on account of the different prices, which their various fubftances require. Thefe circumftances render it impracticable to be inferted, and therefore the prices of both are contained in four tables, exhibited at the end of the treatife. The firt table contains the price of full-fubfanced, or full-proportioned.
Brilliants,

## [91]

Brilliants, explained as follows: The firt column exhibits a fuppofed increafe of fize and weight, from a Stone of a carat, to one of an hundred carats. The firft five articles are carried on by the increafe of one carat each, the following by five carats each. The fecond column contains the price of their workmanfhip, according to their increafe in weight, at the rate of $\mathbf{I} l$. per carat. The reafon of carrying on the gradation by the increafe of five carats, is for the fake of brevity ; as the different prices of the intermediate weights are inconfiderable, compared with the increafed value of fuch Stones. The firft table being explained, it will ferve as an explanation of the other three.

The fecond table exhibits the price of making $\int$ pread Brilliants, which is rated at 1 l. 5 s. per carat; and is

## [ $9^{2}$ ]

fo done for the following reafons: Namely, that all /pread Stones require more care than full-fubftanced ones, and are not fo foon difpatched. The third and fourth tables regard the price of manufacturing Rofe Diamonds; which manufacture demanding lefs labour than that of Brilliants, caufes the price to be one fourth lefs, as will be feen by the $3^{d}$ table regarding full-fubItanced, or full-proportioned Rofe Diamonds. The 4 th table regards /pread Rofe Diamonds, the price of which is the fame with that of full-fubftanced Brilliants, which' is fo raifed for the fame reafons as have been given in the cafe of fpread Brilliants. $N . B$. The prices in thefe tables are to be doubled in wrought Stones, half the weight being loft in manufacturing.

If 1 had not inferted the different expence of manufacturing Diamonds,

## (93)

it would be found wanting in the value of every Stone; but may now be eafily fupplied from the tables juft explained. An inftance will fully evince their ufe, which I will give in the cafe of a full-proportioned Brilliant. For example ; fuppofe the value is required of one of the mean, or middle fort, of $7 \frac{7}{8}$ carats; the Diamond, exclufive of the expence of workmanfhip, comes to 496 l. 2 s. $6 d$; the expence of workmanhip muft be reckoned at 3l. 15 s. per carat, which comes to 26 l. 14 s. 4 d. $\frac{1}{3}$; that being added, the whole makes 522 l. 16 s . $10 \mathrm{~d} . \frac{\mathrm{I}}{\mathrm{z}}$.

From the various helps contained in this book, it may be reafonably expected, that fuch as are skilful in Diamonds, and acquainted with the current price of them, will hereafter univerfally agree.

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The innate perfections and imperfections of Diamonds come next under notice.

Of the innate perfections, imperfections, and water of DIAMONDS.

HE circumftances which diftinguifh the fineft Diamonds are thefe. Their complexion muft be like that of a drop of the cleareft rock water: And if fuch Stones be of a regular form; and be truly made; and free from ftains, fouls, fpots, fpecks, flaws, and crofs veins, they will carry the higheft luftre of any whatever, and will be efteemed the moft perfect.

If any are tinctured yellow, blue, green, or red, in a high degree, 2 which

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which feldom happens, they are next in efteem ; but, if any partake of thefe colours only in a low degree, it finks their value below the beforementioned.

There are other complexions of a more compound fort, fuch as brown, and thofe of a dark hue. The firft of thefe fometimes refemble the browneft fugar-candy, the latter dusky iron. And if any Diamonds are attended with ftains, fouls, fpots, fpecks, flaws, and crofs veins, it will abate their luftre, and fink their value. Here it may be obferved, that what is commonly called the firft water in Diamonds, means the greateft purity, and perfection of their complexion, which, as was faid, muft be like a drop of the cleareft rock water. When any fpeak of a Diamond falling fhort, more or lefs, of that perfection, it is expreffed by faying,

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[96]
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ing, it is of the fecond, or third watef, \&c. till a Stone may be properly called a coloured one. And to fpeak of a Diamond imperfectly coloured, and containing any other defects, as a Stone of a bad water only, is very im= proper ; as it does not convey an idea of the particular colour, or defects belonging to it.

Of the fuperior Worth of DiAmonds, over all other Jewels.

DAMONDS have, in every age, been efteemed the chief of Fereels, on account of their innate fpecifick qualities; which, if not exhibited by proper skill, remain imprifoned. It is certain, that, in their natural fate, they have not fo much
beauty

## [97]

Beauty or luftre, as fome other forts of Jewels; but when truly and judicioufly manufactured, they throw forth a fplendor, and luftre, furpaffing all others, which jufly entitles them to the moft perfect workmanfhip, and will confequently be the mof likely means of perpetuating them in the efteem of the world. And this will tend to eftablifh their worth, and fecure every one's property therein ; whereas a neglect of exhibiting and difplaying their beauty, by proper workmanfhip, will render them unworthy ornaments of the great and diftinguifhed; which; of courfe, muft fink their value. Thefe confiderations, doubtlefs, will influence the curious and difcerning to give all due countenance to their being exhibited, in future times, with that beauty and luftre, of which they are fufceptible. H And

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\left[9^{8}\right]
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And if the following additional ciro cumftances be taken notice of, they will farther thew, that Diamonds deferve the chief regard of all Jewels. Firft, they are the beft repofitory of wealth; inafmuch as they will lie in the fmalleft fpace of any, and are thereby the mort portable and beft conveyance of treafure. Next, their fuperlative Hardne/s fecures them from all injury by wear ; as nothing can make any impreffion on them, or prejudice their luftre, but their rubbing againft each other. They can only be affected by fire, and that muft be ftrong and lafting to do them much harm; and the injury they receive thereby arifes chiefly from taking them too bafily from thence, whereby the immediate impreffion of the cold air may poffibly produce flaws, $\Xi^{\circ} c$. A moderate fire

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will only occafion a roughnefs on their furface, which may be repaired by new polifhing.

Reafons for working Diamonds in a compleat Manner, and the Corsequences refulting from a contrary Practice.

THAT has been raid of the fuperlative properties of Damods, $\sigma^{\circ}{ }^{\circ}$. feems fufficient to recommend them to the protection of mankind, from any abuse arifing by ill workmanship, as their pleafure, honour and intereft are concerned in it ; and nothing appears wanting to influence thereto, but that of the world's being convinced of the neverfifty of it, from being made acquainted

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with the abufe that Diamonds have fuftained by the contrary practice. To that end I hall firf refume the obfervation that has been made on fmall Brilliants; which is, that they are in general fo ill wrought as to be void of their true beauty and luftre, and will not fill up, by one fourth or one third, the fpace that well wrought Stones do, in a piece of jewelling work; of courfe, purchafers of fuch are deprived of one fourth or one third of the fhew or appearance that well wrought Stones would make, and of the beauty and luftre that always accompany fuch: Next, that the fame effects attend Stones of larger fizes, made after the rame manner. $N$. $B$. The fame ill effects alfo attend fmall or large Rofe Diamonds, made in the fame manner. The ends and purpofes that are to be ferved by this manner of working, naturally

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rally fall under confideration: The moft that can be pretended, is, that by the world's being brought into a favoura ble notion of thefe goods, on account of buying them at a lower price by weight than well wrought Stones, trade has been increafed, and more hands employed; but it cannot mean the increafe of England's trade, for that has been declining many years, and its hands unemployed, to the great impoverifhment of the whole body of workmen, and thofe known to be as good as any, if not the beft, in the world ; and which has arifen from their refufing to work after this rude manner, and not being able to fupport themfelves by the wages that are given abroad for fuch work, which appear not equivalent to the wages here given to the meaneft handicraftifmen,

## [ 102 ]

Admitting our neighbours have. increafed the traffick, and employed more hands of the loweft forts than we could ever boaft of; let the confequences which are like to flow from this manner of working be confidered.

By the continuance thereof, the difefteem that has of late been fhewn to Diamonds may increafe; which principally has taken its, rife from thence, particularly in England; and that, probably, has been forwarded by the good appearance which cryftal or falfe Stone work, commonly fo called, has made of late (on which all the embellifhment that care and skill can procure, has been befowed.) This is oblerved to the credit and reputation of thefe traders, and their workmen; and in confequence thereof, this commodity frequently paffes for Diamonds: And if the fame care fould be taken

## [ 103 ]

in compleating that fort of work for foreign ufe, they alfo may enter into the like contempt of Diamonds; if fo , what will become of this boafted increafe of trade? But if the truth of the Diamond manufacture be fupported, their luftre will confpicuoufly excel the faint and languid efforts of all cryftalline matter, with all the helps of art.

To difgrace this firt-rate Gem by ill workmanhip, in bringing it down almof to the level of this commodity, feems to be very unwarrantable, efpecially, as it tends to fink this part of publick wealth, and is a manifeft difcouragement to art and ingenuity, and alfo of great prejudice to fair traders, who fcorn to fubmit to the encouragement of fuch mean deceitful artifices, to enrich themfelves.

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But, notwithftanding what has been offered, to fhew the impropriety, and ill confequences, of working Diamonds in an ill manner; it is to be feared, that fuch as have hitherto found their account in it, will purfue the fame method, fo long as they can find it their intereft fo to do. To prevent this abufe, the fizes of Brilliant and Rofe. Diamonds are exhibited, by which any one may know, whether a Diamond of either manufacture be well or ill made; and this is thought the moft effectual means of putting a fop to it, judging all perfons who have any confiderable value of this kind, will afford their affiftance in difcountenancing fuch an injurious practice ; if fo, the world will fee perfons of rank and fortune diftinguifhed from others, by the inimitable luftre of thefe jewels; for

## [105]

which purpofe, doubtlefs, they were intended.

But it may be faid, that many perfons of rank and fortune are poffeffed of fuch ill wrought Stones, and the encouraging of this refinement of manufacture will make them appear in a worfe light. This is allowed; but at the fame time it is to be underfood, that all ill wrought Stones are capable of being made as perfect, in refpect to workmanhip, as any, without the leant lofs of their expanfion or breadth; and that fuch rectified Stones will appear to fight rather larger than in their prefent form; for by being made more open, every part of their upper furface will be more clearly feen, and what lofs of weight they fuftain will be compenfated by the remaining weight being of more value ; or, in other words, that weight will be worth more per

## [106]

carat; and then, fuch will weigh as much as they ought when fold; and by this means indifferent Diamonds may be made fine, if the matter or fuffbe fuch, which is frequently the cafe; and the reaton of their being but indifferent before, was their being overloaded with weight and other ways ill wrought, which obfured their true luftre. This compliance with what is propofed will make them of rather more value than when boughe, and the lois to the purchafer is that which is paid for rectifying them. This will prove a greater difadvantage to the purchafers of fmall Diamonds than to the purchafers of larger Stones, as the workmanfhip of fmall Stones is a confiderable part of their value.

Here it may be proper to obferve, that the worlt workmanhip is frequently performed on coloured Stones,

## [ 107 ]

to render them cheap, by which means they are generally defpifed; inftead of that, they fhould have all the advantage that art can beftow on them, to recommend them to the juft favour of the world. And Stones, however coloured, that are not attended with rpecks, \{pots, fouls, ftains, or any other defects to weaken their luftre, ought to have the utmoft skill of workmanhip ; and numbers there are, if well wrought, that would carry as much or more vigour and firit than many that do not fall under that denomination ; and, therefore, if any made Stones appear fufceptible of an improvement of their luftre by being rectified, it is fit that fuch Chould receive the benefit thereof, for the fake of the pleafure and credit it muft afford the owners, and the reputation that hach a conduet will bring to this fecies

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of jewels. And it is to be imagined, that this will be thought worthy of fome notice, as the world feems fo Arongly difpofed to value perfection in this jewel; and none can be Laid to be fo, that has any manifeft imperfection of workmanfhip.

And here I fhall take the liberty to oblerve, that the truth of the manufacture of either was never brought under any fated rules of practice, nor was there any recourfe to be had to prove the truth of the manufacture of any Diamond, till this treatife made its firl appearance ; and for, want of fomething of this kind, there have been, in all times paft, innumerable difputes amonght workmen, concerning the true method of working Diamonds.

But this muft be owned, that the feweft difputes on this head have been found

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found amongtt thofe of the beft judg. ment ; and, moreover, it is known, that their practice, when left to work agreeable to their own fentiments, has nearly been conformable to the rules here advanced ; and to which practice they would always have adhered, if left at liberty; but the felfih views of thofe they have wrought for have obitructed it, and laid them under a neceffity of working according to the directions given them. This has been. the caufe of fo much defective workmanfhip on Diamonds, and not only ors middling Stones, but likewife capital ones.

This was the very caule of the largeft Diamond that ever appeared in Europe, being wrought in a deficient manner; which, if it be now as it came out of the hands of thofe who wrought it, I take the liberty to ray,

## [110]

may be rendered compleat; by which means its form will be more comely and graceful, its luftre greatly increafed, and of courfe its value, although its weight may be fomething reduced; and then it may be faid to poffefs all the dignity that nature has favoured it with, and likewife that art has done it juftice.

The firlt fact I can make appear by two leads caft from the Stone; one, when it was a rough Diamond; the other, when cut and polifhed: And the fecond, how it came to be wrought as it was, I can prove by inconteftable evidence, $\sigma^{\circ} c$.

That this is the cafe of this and many other large Diamonds, is not to be wondered at; but rather, how thofe who had the direction of manufacturing fuch Stones, were influenced to fubmit to the lofs of fo much weight,

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having nothing but conjecture to diredt their conduct; and their having left an over weight, muft be owned to be an error of the right fide, as that may be difcharged, whenever it is thought proper ; and it can farcely be imagined, that any will be fond of reraining weight in a Stone, that renders it ungraceful in its figure, and deftroys its life and vigour; efpecially as its expanfion is not leffened thereby, but will appear to fight larget than before, which, perhaps, may caufe a Stone to be deemed good, that before was ranked in a lower clafs. Ands as it has been before faid, fuch Stones will be worth as much, or more, notwithftanding the reduction of their weight, than when poffeffed of their former weight, by the remaining weight being of a higher worth; fo the expence of rectifying them is the only lofs that will be fuftained.

The

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The Ufe of the Sizes in purchafing rough Diamonds.

A$S$ the ufe of the fizes cannot but be fufficiently feen in regard to wrought Stones, they will appear of equal ufe in regard to rough Diamonds; inafmuch as they will affift the judgment concerning the lofs of weight that may be fuftained in working any Diamond; and therefore muft be of great fervice towards forming a right notion of their value, as it is well known, that fome rough Diamonds muft fuftain a much greater lofs; or diminution of weight than others, arifing from their peculiar fhapes. And to form a true judgment of the value of any rough Diamond, the price or value of one of a carat weight fimilar to the

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Stone which is to be purchafed, determines its value, as in the cafe of mamufactured Diamonds. But as it is more difficult to judge what a rough Diamond will prove when cut, than to judge of one mamufactured; the buyer, fuppofing him a merchant, muft act with proper precaution, and make fufficient allowance to himfelf for the uncertainty of the Stone's anfwering expectation when wrought. And, if it be a Stone of a confiderable value, he muft allow himfelf alfo for the intereft of the money he lays out, according to the time he fuppofes the Stone may remain unfold. Thefe precautions are the only means of guarding againt the hazards, and difadvantages, that attend dealing in large rough Diamonds. And, by fuch a conduct, dealers may be enabled to fell at a price agreeable to the eftima-

## [114]

tion of the skilful; which eftimation is the only thing to be regarde ed by thofe who purchafe them for their own ufe. To urge any other confiderations to the purchafer for augmenting the price of any Diamond beyond its juft value, will, it is humbly apprehended, be judged a weaknefs, and likely to hinder the fale of fuch goods.

But, if it fhould be here remarked, that particular cafes, or occafions, may: juntify the feller in demanding an advanced price for any Diamond ; fuch deviations muft be confidered as merely occafional, and the buyer is at liberty, whether he will comply of not.

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Remaris on the India Manufacture of DIAMONDs, and their Cufiom in regard to ROUGH DIAMONDS.

LTHOUGH it has been fuppofed, under the head of valuing Diamonds, that the India people are acquainted with the principle of eftimating them, it will be now thewn, that they are mafters of no other effential parts of knowledge concerning Diamonds.

The manufacture of them they feem to know very little of, as appears by the wrought Stones that come from thence, none of them being fit for ufe, and therefore are always new wrought when brought to Europe; which I Thall defcribe as follows: They are called lasks; they are in general

## [ 16 ]

ill fhaped, or irregular in their form at the girdle; their fubftance, or depth, is ill proportioned; fome have more of the Stone's fubftance at top than at the bottom; their tables are feldom in the middle, or center, of the Stone, and the collets the fame; and fometimes the tables are of an extravagant breadth, and fometimes too fmall; in the fame manner are their collets, and feldom horizontal; and their girdles are often very thick and not level; the fmall work very irregularly performed, and none are properly polifhed; and the chief thing regarded, is that of faving the fize and weight of Stones: And this is not much to be wondered at in them, as they are unacquainted with the beauties of well wroughe Diamonds. From hence it will appear, that they muft be unqualified to judge of the true worth of individual

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individual tough Diamonds. For inflance; they cannot know what a Diamond will lofe in working, to be well made ; nor can they know if a Stone be coloured, what degree of colour it will retain, or what life and fpirit a Stone will carry well wrought; all which they are very confcious of; and this makes it very difficult to trade with them for fingle Stones.

But it is not fo difficult to trade with them for Parcels, becaufe in them there are Stones of all Chapes; and as fome will lofe more, fome lefs, they guefs at that as well as they can; and fo in refpect to their other properties, in which they are not quite fo much at a lofs ; and then they value them by the lump, as they weigh one with another, by the rule.

From whence we may fee, how neceffary it is for Europeans to be furI 3 nifhed

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nifhed with knowledge, as by that means they muft have fome advantageous opportunities in buying large Stones, through the ignorance of thefe people. Although it has been fhewn how much regard they have to the faving of weight in working of Diamonds, their attachment thereto will farther appear by the following cuftom having prevailed time out of mind, the reality of which feems not to be doubted.

The great people there employ a valt number of flaves in fearch of Diamonds: The fmall and middle fize Diamonds they fell, and fome of the large ones; but when they are fortunate in meeting with a very large one, they lay it up as a treafure, to aggrandize their family; and the head of the family has a fmall fhallow hole drilled on the furface of the Stone,

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and when he dies, the next chief does the fame ; and fo from one to another : And the more of thefe holes a Stone has, the higher it is in efteem, alchough fuch holes may prejudice it, if it were to be manufactured ; but as that is never intended, they do not regard fuch prejudice ; and thefe Stones are never parted with, let what will happen ; and if they forefee any ruin to the family (as that fometimes happens in their further purfuit of Diamonds, which is very expenfive by the valt number of hands they employ in that undertaking) in fuch cafes they bury thofe Stones, fo that they never appear again. For they cannot bear the thoughts of any others having the poffeffion of that which they have obtained at fo great an expence ; and it is faid, that, in confequence of that cuftom, there are many very large

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Diamonds irrecoverably loft, and likewife many that will never be parted with.

This cuftom is imagined to arife from their being fearful of a Diamond's lofing its value, by lofing weight and magnitude in being wrought; which is very true, as they work them, becaufe they are void of luftre; and therefore it is not an unreafonable conduct in them, on that account alone; but there is another reafon affigned for it, which is, the hazard their Diamonds are expofed to by their manner of working: This is much greater than what attends the working of Diamonds in Europe, for they perform it in a rougher manner than is done by the Europeans, more efpecially in refpect to polifhing them; in doing of which they lay an exceffive weight on their Diamonds througli

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through unskilfulnefs (and for want of fuch curious machinery or mills, as are in Europe) which makes it not practicable for them to give Diamonds a true polifh.
N. B. Although this is the cafe in refpect to the India manner of working, there come now and then Stones tolerably well wrought and polifhed : but thefe are fuppofed to have beer done by Europeans, and upon their mills and skeves, and to have beer the property of fuch.

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Some Account of A UTHors, who bave beretofore treated of DIAMonDs and Pearls, and the Improvements which bave been made fince their Times.

THOUGH what I have advanced is really the produce of many years critical obfervation in the courfe of dealing in rough and polifhed Diamonds, and has been a work of much time, labour, and great expence ; I am not a little pleafed to fee it agree with what I have fince found to be mentiened by fome celebrated writers, who have exhibited the principle upon which Diamonds are to be valued. The firft which fell into my hands was Monfieur Tavernier, who mentions it in his $V$ oy-

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ages through Turkey, Perfia, and the Eaf-Indies; which he publifhed in the year 1670 , and which were tranflated into Englif/ in the year 1678. The next was the memorable Mr. Lewwis. Roberts, who publifhed it in his map of commerce, in the year $16_{3} 8$. Some time after, I communicated the principle of valuation I have exhibited in this treatife, to an acquaintance of mine, who was a dealer and a Dia-mond-cutter, and who had lived many years at Fort St. George in that capacity; by whom I was informed, that the India traders (meaning the natives of India) had fome eftablifhed rule of eftimating Diamonds, $\mathrm{g}^{\circ} \mathrm{c}$. which he believed to be the fame with what I then propofed. At length, feveral years after the perufal of the above writers, a fill more antient one was dhewn me by means of a gentleman of
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great learning, and of great figure in the literary world. This author wás Fohn Arphe de Villa Fane, who fpeaks of the principle of valuation in his treatife, entitled, Ihe fandard of gold, filver, and precious Stones, publifhed in Spanifb in the year 1572, by the King of Spain's efpecial licence. Thefe writers have mentioned fome attempts to fettle rules for the manufacture of Diamonds; but, it is to be obferved, that not only what they have delivered is very imperfect; but that when they wrote, the art of making Brilliants was not difcovered; which manufacture is effential to the faving of the weight formerly loft, by cutting all rough Diamonds into tables, and rofes; to prevent which lofs of weight; as much as poffible, a heavy load of fubftance has been left on both thefe kinds of manufacture. Moreover, to

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fave weight, rough Diamonds have been frequently farved, efpecially fuch as had no corners, in order to make them into rofes; but this practice was attended with a much greater expence of workmanfhip, and withal, a much greater lofs of weight, than they have been fubject to, fince the making of Brilliants has been introduced; this latter manufacture being more fuitable to Stones of moft hapes.

Thefe obfervations fhew, that if the truth of the manufacture of Table and Rofe Diamonds had been known in times paft, which appears not to have been the cafe, although it might have been of ufe in preventing the palt defective manner of making them, it could not procure the advantages which How from the addition of the Brilliant manufacture, fince that renders the whole a compleat fyftem; and not only contributes to the greatef faving of weight,

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weight, but likewife afcertains the ge-neral lofs of weight, as has been alseady obferved, which could not be known till the manufacure was reduced to fettled rules. The want of this, probably, occafioned a difregard of what has been taken notice of by thefe autbors, concerning the manufacture, and valuation of Diamonds.

The next thing to be confidered is Pearls.

Of Pearzis, their Perfections ands Imperfections.

THESE Jewels are next in importance to Diamonds, as they conftitute the next greateft fhare of wealth of any other kind. The firft thing to be oblerved concerning them,

## [ 127 ]

is, that what beauty they poffers, is the mere produce of nature; and that they are not fufceptible of any advantages or helps by art; a circumftance which recommends them to the efteem of the world. Thofe of the fineft fhape are perfectly round, which fits them for necklaces, bracelets, jewels for the hair, and other fuch like ufes. But if a Pearl, of any confiderable fize, be of the flape of a Pear, it is not reckoned an imperfection, becaufe it may be fuitable for drops to ear-rings, folitairs, and many other jewels. Their complexion muft be milk white, not of a dead and lifelefs, but of a clear and lively hue, free from ftains, fouls, fpots, fpecks, or roughnefs; fuch are of the bigheffefteem and value.

Pearls are defective when rough, fpotted, or dull; whether that be owing to any mifcarriage of nature, or to

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\mathrm{age}_{3}
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[128]
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age, to wear, or any other accident: When irregular in their thapes, be they flat or hollow, craggy or gibbous: When they are fained with any colour, as yellow, blue, green, red, brown, or that of a dusky iron. It is alfo an imperfection, when they have large drilled holes, or are rubbed flat about the edges of the holes by long ufe. Thefe defects caufe a very confiderable difference in the value of Pearls of the fame weight and fize.
Of the Rule of valuing Pearlso

THE only rule of valuing them, is by the fquare of their weight, as in the cafe of Diamonds; nature producing them after the fame manner, viz. a vaft number of fmall ones,

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\left[\begin{array}{l}
129]
\end{array}\right.
$$

and progreffively, a lefs number of larger, as they increafe in fize and weight. Upon this principle two tables are formed, of the prices of Pearls. The firf eight contain thofe of a carat weight downwards, of eight different values, which will be found in Plates XVII, XVIII, XIX, XX, XXI, XXII, XXIII, XXIV. The firf being explained, it ferves for the other feven. The firt column contains the number of Pearls in an ounce Troy, from thofe of a carat weight, to fuch as weigh but the 32 d part of a carat. The fecond column contains the progreflive decreafe of their weight, from thofe of one carat, to thofe of the 32 d part of a carat. The third contains their feveral prices, from one carat at 2 s . to thofe of the $\frac{3}{T^{2}} \frac{3}{8}$ th part of a penny. The fourth contains the price of an ounce, at the rate of 2 s. per carar,

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[130]
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which makes 15 l. to that of the fmalleft fize, which is 9 s. $4 d . \frac{x_{2}}{z_{0}}$

The next thing to be taken notice of, is a Table that relates to Pearls of a carat weight, and upwards, to an hundred carats, which will be found in Plates XXV, XXVI, XXVII, XXVIII, XXIX, XXX. The prices of Pearls in this Table, are founded upon the fuppofition, that the general price of Pearls, good and bad blended together, is $8 s$. per carat; which will be found to be the firft article in it. This Table, therefore, will be of the fame ufe with regard to Pearls, as the Diamond-Tableis in regard to Diamonds. For, if any Pearl exceeds in quality, or falls flort of, thofe of the middle fort ; the rife, or fall, upon the price of a Pearl of any weight mult be fo much per cent. as judgment thall direct; which prevents all trou-

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[\mathbb{I}]
$$

ble of finding it out by the rule. To fhew the convenience of this Ta ble, the following example may be given. If the value of a Pearl of 4 carats $\frac{7}{8}$ is required, which may be fuppofed to be 10 per cent. better than one of the mean or middle price, its price will be found, by the Ta ble, to be gl. ros. id. $\frac{x}{2}$. Then $19 s$. is to be added, which is the produce of the roper cent. and makes its value to be 10 l. 9 s . 1 d . $\frac{\mathrm{x}}{2}$.

To find out the firft price by the rule, reduce the 4 carats $\frac{7}{8}$ into eighths, which makes 39 ; then multiply 39 by 39 , that makes 1521 , the fquare of the weight in fixteenths; therefore divide 1521 by 16 , that brings it again into grains, and makes 95 ; then divide the 95 by 4 , that brings it to carats, and makes 23 carats,

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\mathrm{K}_{2}
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[132]
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3 grains, and $\frac{1}{16}$ of a grain; which, at 8s. per carat, produces gl. $\mathbf{1 0}$ s. $\mathbf{1}$ d. $\frac{1}{2}$.

And as another method is introduced for finding out the value of Diamonds, which is as applicable to Pearls, the foregoing weight is made ufe of as an example.

For inftance; fee what a Pearl of 4 carats $\frac{7}{8}$ comes to at $8 s$. per carat, which will be found to be 395 . fo multiply 39 by 4 , that makes 156 s . or 7 l .16 s , then add the value of $\frac{7}{8}$ of 39 s . which is 1l. 14 s .1 d. $\frac{1}{2}$; caft up the two fums, and that will produce $9 l$. 10 s. $1 d . \frac{1}{2}$ : So thefe two totals are alike, and agree in price with one of that weight in the Table; and that being the price of one of the middle fort, the value of the 10 per cent. muft be added, which is Igs. fo the value of fuch a Pearl is Iol. gs. Id. $\frac{1}{2}$.

Thefe

## [ 133 ]

There inftances are fuppofed fufficient to hew, how much readier the value of any fingle Pearl is to be found, by making ufe of the Table; the ufefulnefs of which will appear in a ftronger light, when it is confidered, what number of occafions Pearls furnifh by their multiplicity, and likewife the fall value they are of individually; although not fo, regarding their quantity. $N . B$. Their value compared with Diamonds is but as $8 s$. to 81.

As an application to the Table appears to be by far the readieft way of coming at the value of any fingle Pearl, its farther ufefulnefs will be Shewn in valuing any parcels of Pearl.

For inftance; fuppofe a parcel of Pearls (be their number and weight what they may) and various, in refeet to their qualities, or goodnefs; K 3 first,

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\left[\begin{array}{ll}
144
\end{array}\right.
$$

firt, weigh the parcel all together; when the weight is known, count their number; when that is known, fee what the weight would be per piece, if they were all of one weight, and then endeavour to form a judgment what they may be rated at per carat, as a mixed Parcel : Having fettled that, fee what a Pearl is worth, of the weight you found they would be of if they were all of equal weight or fize, and then value the weight of the whole Parcel by the price of that Pearl, and that will give the value of the whole Parcel. To illuftrate this, fuppofe 9 Pearls of 9 feveral weights, which may be of different qualities or goodnefs, but being blended together they may be reckoned worth 8 s. per carat. As this fuppofed price agrees with the Table, the example will be drawn from thence, and will
begin

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\text { [ } 135 \text { ] }
$$

begin with the firt article therein, as underneath.

|  | Carats | fors. d. |
| :---: | :---: | :---: |
| 1ft - - of | $1000-$ | $\bigcirc 080$ |
| 2d - | $100 \frac{1}{8}$ | - $101 \frac{1}{2}$ |
| 3d - | $10 \frac{1}{4} 0$ | - 1260 |
| $4^{\text {th }}$ - | $10 \frac{1}{4} \frac{1}{8}$ | - $151 \frac{1}{2}$ |
| 5 th - | $1 \frac{1}{2} 00$ | - 1800 |
| 6th | $1 \frac{1}{2} \bigcirc \frac{1}{8}$ | $1 \mathrm{OI}^{1} \frac{1}{2}$ |
| $7{ }^{\text {th }}$ - | $1{ }^{\frac{1}{2}} \frac{1}{4} 0$ | 10460 |
| 8th - | 1 $\frac{1}{2} \frac{1}{4} \frac{1}{4} \frac{1}{8}$ - | $1081 \frac{1}{2}$ |
| - | $2000-$ | 11200 |

The 9 weigh $13 \frac{x}{2}$ and come to $£ .8$ o9 60

The above 9 Pearls weighing $\mathrm{I}_{3}$ carats $\frac{1}{2}$, would make the weight of each 1 carat $\frac{1}{2}$, the price of which in the Table is $18 s$. therefore multiply 18 s . by 9 , the number of the Pearls, that makes 162 s . or 8 l . 2 s .

The value, rating them by their feveral weights, as above, makes the K 4 total

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\left[\begin{array}{ll}
36
\end{array}\right]
$$

total8\%.9s. 6 d . which is 7 s .6 d . more than by the other method of valuing them; and this arifes from the lofs of fractions in that cafe; and although that be fomething in this fum, it is not worth regard in a larger fum, which will be the fame when Pearls are rated at 8 s . per carat: And for farther fatisfaction the following cafe is inferted.


The

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[137]
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The above 9 Pearls weighing $5^{8}$ carats $\frac{x}{2}$, would make the weight of each 6 carat $\frac{1}{2}$, the price of which in the Table is $162.18 s$. Firf, multiply 9 by 162 . that makes $144 \%$ next, multiply 9 by 18 s . that makes 81. 2s. add thefe two fums together, the total will be 152 l .2 s . which is 7 s .6 d . Short of the above fum of $152 l \mathrm{gs} .6 \mathrm{~d}$. But if the number of articles had been more, and the price of any parcel of Pearl fhould be higher, it can but little increafe the difference; and therefore it is not worth regarding, more efpecially when it is confidered, that none can judge the value of any one Pearl, or parcel, to any fuch-like nicety. As to what has been faid of the convenience of this Table, the fame might have been faid of the DiamondTable; but as there feemed not to be the like neceflity for it, in regard to

Diamonds,

## [ $\mathrm{I}_{3} 8$ ]

Diamonds, it has hitherto been omitred, and the rather, to avoid repetition.

As the convenience of this Table is evidently fhewn, it may be proper to obferve, that in making ufe of that, or either of the other methods, for finding the value of Pearl, the higheft price of any Pearl of a carat weight, cannot be valued at more than $16 s$. when the price of the middle fort, of that weight, is valued at $8 s$. nor thofe of the lower fort, of a carat, at lefs than 2 s . becaufe all of a bafer fort deferve not to be confidered as jewels. And this, probably, will be thought fcope enough to employ fpeculation and judgment; notwithftanding which, it is to be fuppofed, that all who are skilful will agree in fentiments concerning the value of any Pearl of a carat weight, however circumftanced,

## [ 39 ]

as nearly as in the cafe of Diamonds, as the value of Pearls of any weight is to be determined by the price of one of a carat weight, fimilar in all circumftances. Or, as was faid of Diamonds, the fame may be faid of Pearls, that every Pearl is to be valued as it is worth per carat, by the rule of eftimating.
N. B. It is to be obferved, that what is fuppofed of judicious jewellers agreeing in their fentiments to Five or Ten per cent. concerning the value of any Diamond or Pearl of one carat weight, by which the value of a Diamond or Pearl of any weight is to be determined, is to be underfood to relate to the natural and juft value of them only; and when there is a compliance with any other price, that mult be confidered as the occafional price ; and if perfons who buy for their ufe, could be

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be affured what is the juft price of any jewel, it would be the means of inAluencing them to give the value of them. And this muft neceffarily facilitate the tranfactions of this bufinefs; and, I am humbly of opinion, if this had been the cafe in times paft, many capital jewels, which have lain many years in the hands of perfons who bought them in order to make profit of the money laid out, would have found purchafers of them long ago, to the advantage of their prefent owners.

As fo much depends on traders being mafters of the moft compleat knowledge of this bufinefs, it muft be fuppofed they will not be wanting in improving themfelves therein by all means that may be procured, as it will render them a beneficial body to the reft of mankind, and of courfe raife their

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their characters, which have heretofore lain under difagreeable imputations.

Here it may be proper to obferve, that whatever knowledge perfons may have of the juft value of jewels, it will not exempt thofe who buy them for their own ufe from fuftaining a lofs in purchafing them ; but it will leffen the loffes that might otherwife happen, which the world has heretofore been fubject to for want of fuch knowledge. That loffes muft be fuftained is unqueftionable, and that thefe muft vary as circumftances differ, the following cafes will evince.

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[142]
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Obfervations on the Loffes fuppofed to be fuftained by the Purchafe of Jewels.

THE expence of making fome pieces of jewelling work comes to a confiderable part of the purchafe money; and generally, where there is the leaft value of Diamonds, the expence is the greateft ; as, when a large number of fmall Diamonds are employed: When fuch ajewel is re-fold, that expence mult be deducted, if it be injured by wear or by accident, or it becomes unfafhionable.

Again, jewellers mult be fuppofed to have a confiderable fum of money employed in trade, the returns of which are not very frequent ; and therefore a lofs muft unavoidably attend the purchafing Jewels, and the greateft

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[143]
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greateft in buying large Diamonds, although the expence of fetting them be lefs, on account of their lying much longer in the poffeffion of jewellers than thofe of the fmaller fort ; and therefore all jewellers fuppofing the probability of this, never give fo near the value of them as for fmaller Stones, they being always more marketable.

As this is the cafe, perfons of rank and fortune, that need not regard any xeafonable lofs, or the intereft of money, are the proper purchafers of jewels; and the money laid out by fuch perfons can no more be deemed luxury in them, than that which is expended in equipping and furnifhing fide-boards and cabinets, and on all other coftly perfonal equipments in gold and filver. But it may be faid, that the latter is more ufeful and necef-

## [144]

fary than the former. To which it may be anfwered, that its ufes may be fupplied at a much cheaper rate; fo the appearance and credit mult be the remaining motive for laying out money that way; which is the fame in refpect to jewels: And if the loffes attending the purchafing there be an objection, it will be found to lie as ftrong againft the other, in refpect to fafhionable elegant things, the workmanfhip of which, upon an average, comes to at leaft $\frac{x}{4}$, if not $\frac{4}{3}$, of the purchafe money.

The lofs by jewels, it is humbly apprehended, will not, in future times, exceed that, although it has been otherwife in times paft, as appears by inftances that have been given, which fhew that not above $\frac{2}{3}$ or $\frac{7}{4}$ of the purchafe money could be obtained for

## [ 145 ]

for jewels, either by way of pledge, or fale; which has chiefly arofe from jewellers not being well acquainted with the natural and juft value of them, which cannot be the cafe in future time ; it being evident, that traders have it in their power to come at their true value, by eftimating as they are worth per carat, by the rule exhibited. This being the cafe, any one elfe may attain the knowledge of the value of any Diamond or Pearl, or parcels thereof, by applying to a skilful jeweller, to know what they may be worth per carat.

And this will be the means of preventing any perfons felling their jewels on fuch difadvantageous terms, as have been before taken notice of; fince they will rather pledge them, and wait for a more favourable offer; and a better knowledge of their value will procure

## [ 146 ]

more money lent on them, if occafion requires it, than in times paft. And as the skill of traders appears fo ufeful, they muft be fuppofed to be intitled to a fuitable reward for giving their opinions in all fuch cafes. Thefe meafures will tend to fupport the worth of Jewels, and render all property of this kind permanent wealth, exclufive of the deductions a little before mentioned, and make them the proper poffeffion of perfons of rank and fortune here, as well as in other countries; efpecially, if the wealth of the nation increafes, becaufe all purchafes of income mult advance, as that augments, and of courfe bring down the value of money.

For example; if any one fhould be forced to give three hundred pounds for an income that in time paft could be purchafed for two hundred pounds,

## [147]

it is evident that then three hundred pounds is reduced to the value of two hundred! If this be an evil, the laying out the exuberance of our money in Jewels feems to be the propereft redrefs of it, as they are a durable, though not a profitable, treafure; inafmuch as they may be found of convenience in any time of diffrefs, whether private or publick. The latter, indeed, we have the happinefs to have no reafon to fear. What has been obferved of the utility of Jewels, Diamonds efpecially, to perfons of dignity, and thofe of afluent fortunes; and of the conduct of the India people in not forcing the fale of them, by lowering their price, but on the contrary withdrawing them, when there appears a flack demand, which is fuppofed to ariie from the great expence they are at in the fearch of them; for although the price of labour

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in India is exceffive cheap, yet the hands that are employed in this work, as Monfieur Tavernier and other authors have taken notice of, are fo very numerous, that it makes it a coflly, and even a precarious undertaking: And confidering that, notwithftanding Europe has been fupplied with Diamonds from thence, and from the Bra zils, within twenty years laft paft, abundantly more than in any preceding number of years, yet the amount of the annual value of them, on an average, comes a great deal fhort of two hundred thoufand pounds fterling: And farther confidering, that many countries are come more into the ufe of them of late years than formerly; and that fome which in times paft were almoft ftrangers to their exiftence, are now buyers of them, but principally the moft indifferent fort ; which is a
beneficial

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\text { [ } 149 \text { ] }
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beneficial circumftance, as the tafte of other countries, which I need not name, is fo much refined: All thefe circumftances taken into the account, and fuppofing the Brazil mines prove abortive, cannot but abate a furpicion that has been entertained concerning this part of the world's being glutted with Diamonds, which, it is thought by fuch perfons, will in time fink the price of them.

Judging thofe confiderations are fufficient to quell fuch fears, I fhall proceed to fhew it is not the cafe at prefent, their price of late being advanced (I mean in Europe only) and the caufe of it is this, that moft of the capital Jewels are returned into the poffeffion of their proper owners, which have fome years paft been in L 3

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the hands of ufurers, owing to the great expence that fome Princes have been at in the late war; which the peace has not only enabled them to redeem, but likewife qualified them to become farther purchafers. And this proves the fitnefs of pledging Jewels rather than felling them below what they ought to fetch, fuppofing that neceffity does not force any thereto; which is not to be imagined of perfons of high rank, or of good eftates, as time gives them an opportunity of redeeming any pledges.

## CO N CLUSION.

HIS concludes the important fubjects I have been treating of; and the enlargements that have been

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been made to this edition, I flatter myfelf will be found not only explanatory of my firs publication, but that they will likewife give force to what is therein contained, and which would have been added thereto, had I then feer it to be neceffary ; but which I have not been convinced of till lately, and now think the omiflion of it would be an impediment to my defign, which is that of communicating truth and knowledge, beneficial to the publick, and to all ingenious traders, and which is calculated to raife their repucations and ufefulnefs, and likewife to promote art in the embellishments of Diamonds, and recover, if poflible, the almost loft manufacture of them to this kingdom, that has in time pat been poffeffed of the chief share thereof, and which has carried the improvement of it to the greater I. 4 height

## [ $15^{2}$ ]

height of any part of the world, and is now as capable of doing fo as ever, if permitted; which I hope to fee brought about.

The lofs of this valuable manufacture, and of the trade refulting therefrom, has deen wholly owing to a delufive manner of working them abroad, which enables foreigners to fell Diamonds cheaper by weight than it is poffible to afford well wrought ones for. By this means they are become poffeffed of almoft the whole of this manufacture and trade.

And this practice has been much countenanced by fome traders in London, who have fold for fome years paft $\frac{3}{3}$ or more of thefe foreign wrought Diamonds, to the great difredit of their wearers; which conduct feems to come but little fhort of an affront on the quality and gentry of this kingdoms

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dom, and thews a manifett difregard of the interef thereof; which I am forry to have occafion to take notice of, as well as of fome other matters that could not juftifiably efcape my obfervation, but which I am fatisfied will give no offence to any impartial unprejudiced perfon; and the new matter in this edition, I doubt not, will meet with the approbation of the judicious, as it muft give an additional inforcement to what is contained in the firf, and ferves to render thefe important articles of wealth of more eftablifhed worth than in times paft, fince their value appears to be determinable by rules founded on reafon and truth, which has hitherto been fubject to the capricious eftimation of unguided judgment. And I am the moreencouraged to hope for the countenance of fuch perfons, as my firt has received

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\text { [ } 154 \text { ] }
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that honour, as well among people of rank and condition, as among traders in jewels; and I have the fatisfaction of knowing it daily gains ground, and am particularly pleafed in finding a confiderable increafe of bufinefs within twelve months paft, in the beft manner of working Diamonds.

And now being no ways confcious of having taken any unwarrantable freedoms in any part of this treatife, but purfued truth, juftice and the fitnels of things to the beft of my knowledge, I hall not trouble my readers with any farther vindication of my conduct. But in refpect to any imperfection of ftile that may appear in this treatife, I hope the candid part of the world will overlook it, as I make no pretenfion to any accomplifhment in that way; and all that I have aimed at has been to convey my thoughts in as clear

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a manner as my abilities would enable me to do: And this, I queftion not, will be accepted as a fufficient apology for any inaccuracy of expreffion in the book.
N. B. Both the former edition and this are entered in the hall-book of the company of Stationers.


The

| The expence of making full proportioned Brilliant Diamonds. | The expence of making fpread Brilliant Diamonds. |
| :---: | :---: |
| Per Carat. | Per Carat. |
| Carats. f. s. ${ }^{\text {f. }}$ | Carats. |
|  |  |
| 2-- I- 2--6 | 2-- 1-8- $\mathrm{I}^{\frac{1}{2}}$ |
| 3--1- | 3-- 1 - |
| 1-7 | 4-- 1-14- $4^{\frac{1}{2}}$ |
| 1-10-. | 5-- 1-17- |
| 10-- 2-2--6 | 10-- 2-13- $1 \frac{x}{2}$ |
| 15--2-15--0 | 15--3-8-9 |
| 20-- 3-7-6 | 20-- 4-4-4 ${ }^{\frac{1}{2}}$ |
| 25-- 4-0--0 | 25-- 5-0- 0 |
| 30-: 4-12 | 30-- 5-15-72 |
| 35--5-5 | 35-- 6-11-3 |
| 40-- 5-17--6 $45-$ - $10-0$ | $40--7-6-10 \frac{1}{2}$ $45-8-2-6$ |
| 50-- 7-2--6 | 50-- 8-18-1 $1 \frac{1}{2}$ |
| 55--7-15-- | $55-$ - 9-13-9 |
| $60-$ - 8-7--6 | 60--10-9-4 ${ }^{\frac{1}{2}}$ |
| 65--9-0 | 65--II-5-0 |
| 70--9-12 | 70--12-0- $7 \frac{1}{2}$ |
| $75-10-5-0$ | $75-12-16-3$ |
| 85--11-10--0 | $85-14-7-6^{2}$ |
| 90--12-2-6 | 90-15-3-12 |
| 95--12-15--0 | 95--15-18-9 |
| 100--13-7--6 | 100--16-14-4 4 |




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| Pet | Price | OVP | Srice | PVet | Price |
| $6^{r}$ | $1 d$ |  |  |  |  |
| 1 | 8:0:0 | $3 \frac{5}{8}$ | 105:2:6 | $6 \frac{1}{4}$ | 312:10:0 |
| $1 \frac{1}{8}$ | 10:2:6 | $3 \frac{3}{4}$ | 112:10:0 | $6 \frac{3}{8}$ | 325:2:6 |
| $1 \frac{1}{4}$ | 12:10:0 | $3 \frac{7}{8}$ | 120:2:6 | $6 \frac{1}{2}$ | 338:0:0 |
| 1 $\frac{3}{8}$ | 15:2:6 | 4 | 128:0:0 | $6 \frac{5}{8}$ | 351:2:6 |
| $1 \frac{1}{2}$ | 18:0:0 | $4^{\frac{1}{8}}$ | 136:2:6 | $6 \frac{3}{4}$ | 364:10:0 |
| 1 $\frac{6}{8}$ | 21:2:6 | $4^{\frac{1}{4}}$ | 144:10:0 | 68 | 378:2:6 |
| $1 \frac{3}{4}$ | 24:10:0 | $4^{\frac{3}{8}}$ | 153:2:6 | 7 | 392:0:0 |
| $1 \frac{7}{8}$ | 28:2:6 | $4^{\frac{1}{2}}$ | 102:0:0 | $7 \frac{1}{8}$ | 406:2:6 |
| 2 | 32:0:0 | $4 \frac{8}{8}$ | 171:2:6 | $7 \frac{1}{4}$ | 420:10:0 |
| $2^{\frac{1}{8}}$ | $36: 2: 6$ | $4 \frac{3}{4}$ | 180:10:0 | $7 \frac{3}{8}$ | 435:2:6 |
| $2 \frac{1}{4}$ | 40:10:0 | $4 \frac{7}{8}$ | 190:2:6 | $7 \frac{1}{2}$ | 450:0:0 |
| $2 \frac{3}{8}$ | 45:2:6 | 5 | 200:0:0 | $7 \frac{5}{8}$ | 465:2:6 |
| $2 \frac{1}{2}$ | 50:0:0 | $5^{\frac{1}{8}}$ | 210:2:6 | $7 \frac{3}{4}$ | 480:10:0 |
| $2 \frac{5}{8}$ | 55:2:6 | $5 \frac{1}{4}$ | 220:10:0 | $7 \frac{7}{8}$ | 196:2:6 |
| $2 \frac{3}{4}$ | 60:10:0 | $5 \frac{3}{8}$ | 231:2:6 | 8 | 512:0:0 |
| $2 \frac{7}{8}$ | 66:2:6 | $5^{\frac{1}{2}}$ | 242:0:0 | $8 \frac{1}{8}$ | 528:2:6 |
| 3 | 72:0:0 | $5^{8}$ | 2.33:2:6 | $8 \frac{1}{4}$ | 544:10:0 |
| $3 \frac{1}{8}$ | $78: 2: 6$ | $5 \frac{3}{4}$ | 264:10:0 | $8 \frac{3}{8}$ | 561:2:6 |
| $3 \frac{1}{4}$ | 84:10:0 | $5 \frac{7}{8}$ | 276:2:6 | $8 \frac{1}{2}$ | 578:0:0 |
| $3 \frac{3}{8}$ | 91:2:6 | 6 | 288:0:0 | $8 \frac{5}{8}$ | 595:2:6 |
| $3 \frac{1}{2}$ | 98:0:0 | $6 \frac{1}{8}$ | 300:2:6 | $8 \frac{3}{4}$ | 612:10:0 |

12

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| :---: | :---: | :---: | :---: | :---: | :---: |
| OV. ${ }^{\text {t }}$ | Pruce | 90. | Srice | OV. ${ }^{\text {t }}$ | Price |
|  |  |  |  |  | $f$ |
| $8 \frac{7}{8}$ | 630:2:6 | $11 \frac{1}{2}$ | 1058:0:0 | $14^{\frac{1}{\delta}}$ | 1596:2.6 |
| 9 | 648:0:0 | $11 \frac{5}{8}$ | 1081:2:6 | $14 \frac{1}{4}$ | 1624:10:0 |
| $9^{\frac{1}{8}}$ | 666:2:6 | 117 | 1104:10:0 | $14{ }^{3}$ | 1653:2:6 |
| $9^{\frac{1}{4}}$ | 684:10:0 | 11\% | 1128:2:6 | $14{ }^{\frac{1}{2}}$ | 1682:0:0 |
| 9 ${ }^{3}$ | 703:2:0 | 12 | 1152:0:0 | 148 | 1711:2:6 |
| $9^{\frac{1}{2}}$ | 722:0:0 | $12^{\frac{1}{8}}$ | 1176:2:6 | $14^{\frac{3}{4}}$ | $1740: 10: 0$ |
| $9 \frac{5}{8}$ | 741:2:6 | 12 $\frac{1}{4}$ | 1200:10:0 | $14^{7} 8$ | 1770:2:6 |
| $9^{\frac{3}{4}}$ | 760:10:0 | $12 \frac{3}{8}$ | 1225:2:6 | 15 | 1800:0:0 |
| $9^{\frac{7}{8}}$ | $780: 2: 0$ | $12^{\frac{1}{2}}$ | 1250:0:0 | $15^{\frac{1}{8}}$ | 1830:2:6 |
| 10 | 800:0:0 | $12 \frac{5}{8}$ | 1275:2:6 | 154 | 1860:10:0 |
| 108 | 820:2:6 | $12 \frac{3}{4}$ | 1300:10:0 | $15 \frac{3}{8}$ | 1891:2:6 |
| $10 \frac{1}{4}$ | 840:10:0 | $12^{\frac{7}{8}}$ | 1326:2:6 | $15^{\frac{1}{2}}$ | 1922:0:0 |
| $10^{\frac{3}{8}}$ | 861:2:6 | 13 | 1352:0:0 | $15 \frac{5}{8}$ | 1953:2:6 |
| $10^{\frac{1}{2}}$ | 882:0:0 | $13{ }^{\frac{1}{8}}$ | 1378:2:6 | $15 \frac{3}{4}$ | 1984:10:0 |
| $10^{\frac{5}{8}}$ | 903:2:6 | $13 \frac{1}{4}$ | 1404:10:0 | $15 \frac{7}{8}$ | 2016:2:6 |
| 103 | 924:10:0 | $13 \frac{3}{8}$ | 1131:2:6 | 16 | 2048:0:0 |
| $10^{\frac{7}{8}}$ | 946:2:6 | $13^{\frac{1}{2}}$ | 1458.0:0 | $16 \frac{1}{8}$ | 2080:2:6 |
| 11 | 968:0:0 | $13 \frac{5}{8}$ | 1485:2:6 | 16\% | 2112:10:0 |
| $11 \frac{1}{8}$ | 990:2:6 | 134 | 1512:10:0 | $16 \frac{3}{8}$ | 2145:2:6 |
| $11 \frac{1}{4}$ | 1012:10:0 | $13 \frac{7}{8}$ | 1540:2:6 | $16 \frac{1}{2}$ | 2178:0.0 |
| $11 \frac{3}{8}$ | 1035:2:6 | 11 | 1.568:0:0 | 16 $\frac{5}{8}$ | 2211:2:6 |


$13$

$14$



| 91. | - Price | Ot. ${ }^{\text {t }}$ | OPrice | OV. | Orice |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $G^{2}$ | f $f$ | $G^{2}$ | f.g | $C^{2}$ | $f$ |
| 40 | 12800:0 | $45^{\frac{1}{4}}$ | 16380:10 | 51 | 20808 |
| $40 \frac{1}{4}$ | 12960:10 | $45 \frac{1}{2}$ | 16562:0 | $51 \frac{1}{2}$ | 21218 |
| $40^{\frac{1}{2}}$ | 13122:0 | $45^{\frac{3}{4}}$ | 16744:10 | 52 | 21632 |
| $40 \frac{3}{4}$ | 13284:10 | 46 | 16928:0 | $52 \frac{1}{2}$ | 22050 |
| 41 | 13448:0 | $46 \frac{1}{4}$ | 17112:10 | 53 | 22.472 |
| 41年 | 13612:10 | $46^{\frac{1}{2}}$ | 17298:0 | $53 \frac{1}{2}$ | 22898 |
| $41^{\frac{1}{2}}$ | 13778:0 | $46 \frac{3}{4}$ | 17484:10 | 54 | 23328 |
| $41 \frac{3}{4}$ | 13944:10 | 47 | 17672:0 | $54^{\frac{1}{2}}$ | 23762 |
| 42 | 14112:0 | $47 \frac{1}{4}$ | 17860:10 | 55 | 24200 |
| $42 \frac{1}{4}$ | 14280:10 | $47^{\frac{1}{2}}$ | 18050:0 | $55^{\frac{1}{2}}$ | 24642 |
| $42^{\frac{1}{2}}$ | 14450:0 | $47^{\frac{3}{4}}$ | 18240:10 | 56 | 25088 |
| $42^{\frac{3}{4}}$ | 14620:10 | 48 | 18432:0 | $56 \frac{1}{2}$ | 25538 |
| 43 | 14792:0 | $48 \frac{1}{4}$ | 18624:10 | 57 | 25992 |
| $43 \frac{1}{4}$ | 14964:10 | $48^{\frac{1}{2}}$ | 18818:0 | $57 \frac{1}{2}$ | 26450 |
| $43 \frac{1}{2}$ | 15138:0 | $48 \frac{3}{7}$ | 19012:10 | 58 | 26912 |
| $43 \frac{3}{4}$ | 15312:10 | 49 | 19208:0 | 582 | 21378 |
| 44 | 15488:0 | 49 ${ }^{\frac{1}{7}}$ | 19404:10 | 59 | 27848 |
| $44^{\frac{1}{4}}$ | 15664:10 | $49^{\frac{1}{2}}$ | 19602:0 | $50^{\frac{1}{2}}$ | 28322 |
| $44^{\frac{1}{2}}$ | 15842:0 | 49 ${ }^{\frac{3}{7}}$ | $19800: 10$ | 60 | 28800 |
| $44^{\frac{3}{4}}$ | 16020:10 | 50 | 20000:0 | $60 \frac{1}{2}$ | 29282 |
| 45 | 16200:0 | $50 \frac{1}{2}$ | 20402:0 | 61 | 29768 |



| 17 |  |  |  |
| :---: | :---: | :---: | :---: |
| The Tables of small Pearl. |  |  |  |
| The Tlumber of Pearl in andz."iry | Their <br> Weight | Theirvalue $\begin{gathered} \text { piopicece } \\ \text { at } 2 \text { pecarrat } \end{gathered}$ | Their Value p. Ounce atthat:Rate |
| $\cdots$ | $G^{2}$ | $1 d$ | ford |
| 150 | 1 | 2:0 | 15:0:0 |
| . 160 | $\frac{15}{10}$ | $1: 9{ }^{\frac{3}{32}}$ | $14: 1: 3$ |
| 171 | $\frac{7}{8}$ | $1: 6 \frac{3}{8}$ | 13. 1:10 ${ }^{\frac{1}{8}}$ |
| 184 | $\frac{13}{18}$ | $1: 3 \frac{27}{32}$ | 12:2:114 |
| 200 | $\frac{3}{4}$ | $1: 1 \frac{1}{2}$ | 11:5:0 |
| 218 | 110 | $11 \frac{11}{38}$ | 10:6:0 0 年 10 |
| 240 | $\frac{5}{8}$ | $9^{\frac{3}{8}}$ | $9: 7: 6$ |
| 266 | $\frac{9}{16}$ | $7 \frac{19}{32}$ | $8: 8: 3 \frac{15}{15}$ |
| 300 | $\frac{1}{2}$ | 6 | 7:10:0 |
| 342 | $\frac{7}{16}$ | $4^{\frac{19}{32}}$ | 6:10:1110 |
| 400 | $\frac{3}{8}$ | $3 \frac{3}{8}$ | 5:12:6 |
| 480 | $\frac{5}{16}$ | $2 \frac{11}{32}$ | 4:13:9 |
| 600 | $\frac{1}{4}$ | $1 \frac{1}{2}$ | 3:15:0 |
| 800 | $\frac{3}{10}$ | ${ }^{27}$ | 2:16:3 |
| 1200 | $\frac{1}{8}$ | $\frac{3}{8}$ | 1:17:6 |
| 2400 | $\frac{1}{10}$ | $\frac{3}{32}$ | 18:9 |
| 4800 | $\frac{1}{32}$ | $\frac{3}{128}$ | $9: 4^{\frac{1}{2}}$ |



## $19$




$21$


## $22$




$24$



| The \%alites of large seart. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 771 | - Price | P1t | Spice | $90 t$ | Mrice |
| Cr | $f$ |  |  |  |  |
| 1 | 8:0 | $3 \frac{5}{8}$ |  | 4 |  |
| $1 \frac{1}{8}$ | 10:1 | $3 \frac{3}{4}$ | ? | 4 | $\frac{1}{2}$ |
| $1 \frac{1}{4}$ | 12. | $3 \frac{7}{8}$ |  | $6 \frac{1}{2}$ |  |
| $1 \frac{3}{8}$ |  |  |  |  |  |
| 18 |  | 4 |  | $6 \frac{5}{8}$ | 17: 11: $1 \frac{1}{2}$ |
| $1 \frac{1}{2}$ | 18:0 | $4^{\frac{1}{8}}$ | $6: 16: 1 \frac{1}{2}$ | $6 \frac{3}{4}$ | 18:4:6 |
| $1 \frac{5}{8}$ | $1: 1: 1{ }^{\frac{1}{2}}$ | $4^{\frac{1}{4}}$ | 7:4:6 | $6 \frac{7}{8}$ | 18:18:12 |
| $1 \frac{3}{4}$ | 1: 4:6 | $4 \frac{3}{8}$ | 7:13: $1 \frac{1}{2}$ | 7 | 19:12:0 |
| $1 \frac{7}{8}$ | $1: 8: 1 \frac{1}{2}$ | $4 \frac{1}{2}$ | 8:2:0 | $7 \frac{1}{8}$ | 20:6:12 |
| 2 | 1:12:0 | $4{ }^{\frac{5}{8}}$ | 8:11: $1^{\frac{1}{2}}$ | $7 \frac{1}{4}$ | 21:0:6 |
| $2 \frac{1}{8}$ | 1:16:12 ${ }^{\frac{1}{2}}$ | $4 \frac{3}{4}$ |  | $7 \frac{3}{8}$ | $21: 15: 1^{\frac{1}{2}}$ |
| $2 \frac{1}{4}$ | 2:0:6 | $4 \frac{7}{8}$ | 9:10:12 | $7 \frac{1}{2}$ | 22:1 |
| $2 \frac{3}{8}$ | $2: 5: 1 \frac{1}{2}$ | 5 | 10:0:0 | $7 \frac{5}{8}$ | $23: 5: 1 \frac{1}{2}$ |
| $2^{\frac{1}{2}}$ | 2:10:0 | $5 \frac{1}{8}$ | 10:10:1年 | $7 \frac{3}{4}$ | 24:0:6 |
| $2 \frac{5}{8}$ | $2: 15: 12^{\frac{1}{2}}$ | $5 \frac{7}{4}$ | 11:0:6 | $7 \frac{7}{8}$ | $24: 16: 1 \frac{1}{2}$ |
| $2 \frac{3}{4}$ | 3: $0: 6$ | $5 \frac{3}{8}$ | 11:11:12 | 8 | 25:12:0 |
| $2 \frac{7}{8}$ | 3: $6: 1 \frac{1}{2}$ | $5^{\frac{1}{2}}$ | 12: 2:0 | $8 \frac{1}{8}$ | 26:8.1年 |
| 3 | 3:12:0 | $5 \frac{5}{8}$ | 12:13: $1 \frac{1}{2}$ | $8 \frac{1}{4}$ | 6 |
| $3 \frac{1}{8}$ | $3: 18: 1 \frac{1}{2}$ | $5 \frac{3}{4}$ | 13:4:6 | $8 \frac{3}{8}$ | 28:1:12 |
| $3 \frac{1}{4}$ | 4:4:6 | $5 \frac{7}{8}$ | 13:16:12 | $8 \frac{1}{2}$ | 28:18:0 |
| $3 \frac{3}{8}$ | 4: $11: 11^{\frac{1}{2}}$ | 6 | 14:8:0 | $8 \frac{5}{8}$ | 29:15:72 |
| $3^{\frac{1}{2}}$ | 4:18:0 | $6 \frac{1}{8}$ | $15: 0: 1 \frac{1}{2}$ | $8 \frac{3}{4}$ | 30:12:6 |

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$20$



| 27 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Carge Pearl conlinued. |  |  |  |  |  |
| 711， | Price | $02 . t$ | Price | M12． | Price |
| $b^{r}$ | L．.$d$. | $\mathscr{C}^{r}$ | f．f．d． | Cr． | $\mathcal{L} .1 . d$ |
| $16 \frac{3}{4}$ | 112：4：6 | $19^{\frac{3}{8}}$ | 1．50：3：17 | 22 | 103：12：0 |
| $16 \frac{7}{8}$ | 113：18：72 ${ }^{\frac{1}{2}}$ | $19^{\frac{1}{2}}$ | 152：2：0 | $22^{\frac{1}{8}}$ | 195：16：1212 |
| 17 | 115：12：0 | $19^{\frac{5}{8}}$ | 154：1：1 $1^{\frac{1}{2}}$ | $22^{\frac{1}{4}}$ | 198：0：6 |
| $17 \frac{1}{8}$ | 117：6：17 ${ }^{\frac{1}{2}}$ | $19 \frac{3}{4}$ | 156：0：6 | 228 | 200：5：172 |
| $17 \frac{1}{4}$ | 119：0：6 | $19^{\frac{7}{8}}$ | 158：0：172 | $22^{\frac{\prime}{2}}$ | 202：10：0 |
| $17 \frac{3}{8}$ | 120：15：12 | 20 | 160：0：0 | $22^{\frac{5}{8}}$ | 204：13：1／1 |
| $17^{\frac{1}{2}}$ | 122：10：0 | $20^{\frac{1}{8}}$ | 162：0：12 | $22^{\frac{3}{4}}$ | 207：0：6 |
| $17 \frac{5}{8}$ | 124：5：17 | $20^{\frac{1}{4}}$ | 164：0：6 | 228 | 209：6：1／${ }^{\frac{1}{2}}$ |
| $17 \frac{3}{4}$ | 126：0：6 | $20^{\frac{3}{8}}$ | 166：1：12 | 23 | 211：12：0 |
| $17 \frac{4}{8}$ | 127：16：1克 | $20^{\frac{1}{2}}$ | 168：2：0 | $23 \frac{1}{8}$ | 213：18：12 |
| 18 | 129：12：0 | $200^{\frac{5}{8}}$ | 170：3：1\％ | $23 \frac{1}{4}$ | 216：4：6 |
| $18 \frac{1}{8}$ | 131：8：172 | $20^{\frac{3}{4}}$ | 172：4：6 | $2.3 \frac{3}{8}$ | 218：11：12 |
| $18 \frac{1}{4}$ | 133： | $20 \frac{7}{8}$ | 17. | 23 | 220：18：0 |
| $18 \frac{3}{8}$ | 135： $1: 11^{\frac{1}{2}}$ | 21 | 176：8：0 | $23^{\frac{5}{8}}$ | 223：5：1／2 |
|  | 136：18：0 | $21^{\frac{1}{8}}$ | 178：10：12 ${ }^{\frac{1}{2}}$ | $23 \frac{3}{4}$ | 225：12：6 |
| $18 \frac{5}{8}$ | 138：15：17 ${ }^{\frac{1}{2}}$ | 21年 | 180：12：6 | 238 | 228：0：1退 |
| $18 \frac{3}{4}$ | 140：12：6 | $21 \frac{3}{8}$ | 182：15：1年 | 24 | 230：8：0 |
| $18 \frac{7}{8}$ | 142：10：12 ${ }^{\frac{1}{2}}$ | $21^{\frac{1}{2}}$ | 184：18：0 | $24^{\frac{1}{8}}$ | 232：16：1 ${ }^{\frac{1}{2}}$ |
| 19 | 144：8：0 | $21 \frac{5}{8}$ | 187：1：1／1 | $24 \frac{1}{4}$ | 235：4：6 |
| $19^{\frac{1}{8}}$ | 146：6：1／2 | $21 \frac{3}{4}$ | 189：4：6 | $24 \frac{3}{8}$ | 237：13：1／2 |
| 19 ${ }^{\frac{1}{4}}$ | 148：4：6 | $21^{\frac{7}{8}}$ | 191： $8: 1 \frac{1}{2}$ | $24^{\frac{1}{2}}$ | 240：2：0 |


| 28 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Large. Pearl continued. |  |  |  |  |  |
| Mr: | Price | P1.t | Price | Mret | Price |
| $C^{r}$ | $\mathcal{L}$. S.d. | $\mathscr{C}^{2}$ | f. J.d. | $\mathscr{C}^{\prime \prime}$ | $\mathcal{L}, \mathcal{S}, \mathrm{d}$. |
| $24^{\frac{5}{8}}$ | 242:1/:1/2 | $29^{\frac{1}{2}}$ | 348:2:0 | $34 \frac{3}{4}$ | 483:0:6 |
| $24 \frac{3}{4}$ | 245:0:6 | $29 \frac{3}{4}$ | 354:0:6 | 35 | 490:0:0 |
| $24 \frac{7}{8}$ | 247:10:12 | 30 | 360:0:0 | $35^{\frac{1}{4}}$ | 497:0:6 |
| 25 | 250:0:0 | $30 \frac{1}{4}$ | 366:0:6 | 35 ${ }^{\frac{1}{2}}$ | 504:2:0 |
| 25\% | 255:0:6 | $30^{\frac{1}{z}}$ | 372:2:0 | $35 \frac{3}{4}$ | 511:4:6 |
| $25^{\frac{1}{2}}$ | 260:2:0 | $30 \frac{3}{4}$ | 378:4:6 | 36 | 518:8:0 |
| $25^{\frac{3}{4}}$ | 26.5:4:6 | 31 | 384:8:0 | $36 \frac{1}{4}$ | 52.5:2:6 |
| 26 | 270:8:0 | $31 \frac{1}{4}$ | 390:12:6 | $36 \frac{1}{2}$ | 532:18:0 |
| $26^{\frac{1}{4}}$ | 275:12:6 | $31 \frac{1}{2}$ | 396:18:0 | $36 \frac{3}{4}$ | 540:4:6 |
| 26\% | 280:18:0 | 314 | 403:4:6 | 37 | 547:12:0 |
| $26 \frac{3}{4}$ | 286:4:6 | 32 | 409:12:0 | $37 \frac{1}{4}$ | 555:0:6 |
| 27 | 291:12:0 | $32^{\frac{1}{4}}$ | 416:0:6 | $37 \frac{1}{2}$ | 562:10:0 |
| $27^{\frac{1}{4}}$ | 297:0:6 | $32^{\frac{1}{2}}$ | 422:10:0 | $37^{\frac{3}{4}}$ | 570:0:6 |
| $27 \frac{1}{2}$ | 302:10:0 | $32 \frac{3}{4}$ | 429:0:6 | 38 | 577:12:0 |
| $27 \frac{3}{4}$ | 308:0:6 | 33 | 435:12:0 | $38 \frac{1}{4}$ | 585:4:6 |
| 28 | 313:12:0 | 33年 | 442: 4:6 | $38^{\frac{1}{2}}$ | 592:18:0 |
| $28^{\frac{1}{4}}$ | 319:4:6 | $33^{\frac{1}{2}}$ | 448:18:0 | $38{ }^{\frac{3}{4}}$ | 600:12:6 |
| $28 \frac{1}{2}$ | 324:18:0 | $33 \frac{3}{4}$ | 455:12:6 | 39 | 608:8:0 |
| $28 \frac{3}{4}$ | 330:12:6 | 34 | 462:8:0 | $39 \frac{1}{4}$ | 616:4:6 |
| $29$ | 336:8:0 | $34^{\frac{1}{4}}$ | 469:4:6 | $39 \frac{1}{2}$ | 624:2:0 |
| $29^{\frac{1}{4}}$ | 342:4:6 | $34^{\frac{1}{2}}$ | 476:2:0 | $39 \frac{3}{4}$ | 632:0:6 |



| Large sparl continued |  |  |  |  |  |
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| 47. | Sirice | 9/V.t | Price | OVt | Grice |
| $C^{r}$ | $t^{1}$ | Gr | I | Or |  |
| $61 \frac{1}{2}$ | 1512:18 | 72 | 2073:12 | 00 | 3240:0 |
| 62 | 1537:12 | $72{ }^{\frac{1}{2}}$ | 2102:10 | 91 | $3312: 8$ |
| $62 \frac{1}{2}$ | 1562:10 | 73 | 2131:12 | 92 | 3385: 12 |
| 63 | 1587:12 | $73 \frac{1}{2}$ | 2160:18 | 93 | 3459 : 12 |
| $63{ }^{\frac{1}{2}}$ | 1612:18 | 74 | 2190:8 | 94 | $3534: 8$ |
| 64 | 1638:8 | $74^{\frac{1}{2}}$ | 2220:2 | 95 | $3610: 0$ |
| $64^{\frac{1}{2}}$ | 1664:2 | 75 | 2250:0 | 96 | 3686:8 |
| 65 | 1690:0 | 76 | 2310:8 | 97 | 3763:12 |
| $65 \frac{1}{2}$ | 1716:2 | 77 | 2371:12 | 98 | 3841:12 |
| 66 | $1742: 8$ | 78 | 2433:12 | 99 | $3020: 8$ |
| $66 \frac{1}{2}$ | $1768: 18$ | 79 | 2496:8 | 100 | 4000:0 |
| 67 | 1795:12 | 80 | 2560:0 |  |  |
| $67 \frac{1}{2}$ | 1822:10 | 81 | 2624:8 |  |  |
| 68 | $1849: 12$ | . 82 | 2689:12 |  |  |
| $68 \frac{1}{2}$ | 1876:18 | 83 | 2755:12 |  |  |
| $6 q$ | 1904:8 | 84 | 2822:8 |  |  |
| $6 q^{\frac{1}{2}}$ | 1932: 2 | 85 | 2890:0 |  |  |
| 70 | 1960:0 | 86 | 29.58:8 |  |  |
| $70^{\frac{1}{2}}$ | 1988:2 | 87 | 3027:12 |  |  |
| 71 | 2016:8 | 88 | 3097:12 |  |  |
| $71 \frac{7}{2}$ | 2044:18 | 89 | 3168:8 |  |  |




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